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UNITED STATES DEPARTMENT OF AGRICULTURE
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TOBACCO PRODUCTION AND CONSUMPTION
IN THE JAPANESE EMPIRE

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N O T E

All units of weights and measures used in this report are those recognized as standard in the United States.

Quotations of price and value are all in United States currency.

Conversions of prices and values that apply to a particular date or period have been made at an available rate that is most applicable for the date or period. Where such average rates are available, prices of domestically produced tobacco have been converted at the average exchange rate for the marketing season October to March. In years for which average seasonal rates are not available the annual average exchange for the calendar year in which the marketing of the crop began was used. The following tabulation shows the average yen selling rate for calendar years 1918 to 1938 and average yen selling rate during the marketing seasons 1924-25 to 1938-39:

Year	Calendar-year average	Marketing season a/	Year	Calendar-year average	Marketing season a/
	Gents	Cents		Gents	Cents
1918	51.47	--	1928	46.50	45.67
1919	50.81	--	1929	46.17	48.89
1920	49.78	--	1930	49.40	49.50
1921	48.15	--	1931	48.91	40.77
1922	48.38	--	1932	28.08	21.17
1923	48.88	--	1933	25.42	29.69
1924	42.00	38.94	1934	29.63	26.47
1925	40.93	43.54	1935	28.61	28.92
1926	47.12	48.96	1936	28.92	28.45
1927	47.48	46.67	1937	28.68	28.89
			1938	28.44	27.38

Calendar-year averages 1918 to 1924 from Yokohama Specie Bank; 1925 to 1938 compiled by American Consulate, Tokyo, from daily reports of Tokyo branch, National City Bank of New York. Marketing-season average compiled by American Consulate, Tokyo, from daily reports of National City Bank.

a/ Average for 6 months, October to March of the following year.

TOBACCO PRODUCTION AND CONSUMPTION IN THE JAPANESE EMPIRE

The areas that now comprise the Japanese Empire (Japan, Chosen, and Taiwan) have for decades been a market for substantial quantities of American flue-cured tobacco and have at times taken small quantities of certain other types. Their yearly purchases of flue-cured leaf have never approached the large volume taken by the United Kingdom or China but have often equalled or surpassed quantities sent to Germany, the Netherlands, Canada, or Australia. In recent years the Empire, as a whole, has taken from 1.5 to 4.5 percent of the total United States exports of flue-cured leaf.

Exports of flue-cured tobacco from the United States to the Japanese Empire became significant near the close of the nineteenth century, when cigarette consumption began to expand rapidly in most parts of the world. From 1896 to 1899 a substantial proportion of total exports to the Japanese Empire was in the form of cigarettes, but since 1900 cigarettes have accounted for only a small portion of the total.

Flue-cured production from American seed began in Japan proper in 1902 and in Chosen and Taiwan in 1914. Its production has subsequently expanded about in proportion to the increase in volume needed in cigarette manufacture. Consequently, imports of flue-cured from the United States did not increase as rapidly as was the case with many other foreign countries. By the fiscal year 1923-24 they had only increased to about 12,000,000 pounds. Since that year they have ranged between 4,000,000 and 12,000,000 pounds annually. The trend has been downward since 1930-31.

Production of flue-cured leaf in the Japanese Empire has in recent years increased more rapidly than consumption. As a consequence, small quantities have been exported to China, Manchuria, and Europe, where it has been sold in competition with American. For the marketing year April to March 1936-37, approximately 10,000,000 pounds were exported as compared with an import from the United States of only 4,600,000 pounds.

The production of domestic type leaf has declined with increased flue-cured production; however, production continues to be sufficient for domestic requirements and to supply the export demand. For a number of years certain domestic types have been exported to Egypt for use in cigarettes, and in recent years an effort has been made to introduce their use in Europe.

The Japanese Empire shift in recent years from a deficit to a surplus area as regards flue-cured leaf and the effort being made to export its native leaf, which would offer some competition with cigarette types exported from the United States, are of importance to American tobacco growers. This report brings together facts regarding all phases of the tobacco industry in the Japanese Empire and concludes with a statement of possible future developments.

ORIGIN AND EARLY DEVELOPMENTS

Tobacco has been produced and consumed in the Japanese Empire for some 300 years or more. It is generally conceded, however, that it is not indigenous to any of the present component parts of the Japanese Empire. Early Japanese writings as far back as 1600 indicate that tobacco was not known in Japan proper until it was introduced from abroad.

The only evidence indicating a possibility that tobacco might be indigenous to Japan is the discovery in recent years of tobacco growing in wild mountainous areas where so far as is known human beings had not previously penetrated or, if at all, rarely visited. The types discovered show more similarity to American and other foreign types than do the domestic types now extensively cultivated in Japan.^{1/} It is quite probable that the seeds from which these wild plants originated were carried there by migrating birds at an early date when foreign-type tobaccos were first introduced. As a result of their isolation, they have not been crossed with other varieties or influenced by cultural practices and have maintained their original characteristics more than has been the case with commercially produced tobacco.

It is generally conceded that the Portuguese - their navigators and missionaries - were the first to introduce the use of pipes and probably tobacco cultivation into Japan. A letter from a Japanese correspondent to Comes^{2/} states that: (1) the Japanese began to use tobacco some time in the fifteenth century when Christianity was first introduced into Japan by the Portuguese, (2) smoking was quite common by 1595, (3) about 1596, tobacco seed was first imported into Japan from some foreign country and cultivated in the province of Satsuma (now included in the prefecture of Kagoshima), (4) this was the first time that tobacco was cultivated in Japan, and (5) later, about 1605, more tobacco seeds were brought from a foreign ship and planted in the town of Nagasaki.

Other records show that planting of tobacco began in other districts between 1605 and 1620, the seed in each case coming from Spanish and Portuguese possessions, or China.

Early Uses and Prohibitive Measures

When tobacco was first introduced into Japan it was used for medicinal purposes. Consumption spread, however, and it soon came into general use in various forms. Smoking, the most popular form of consumption, was a common practice among people of almost all ages and both sexes. Snuff was used to some extent in Chosen and perhaps Taiwan but there is little evidence of its use in Japan proper. Pipes soon became the chief method of consumption. Crude cigarettes were also in use. They were conical in shape and made of bamboo leaf wrappers with smoking tobacco stuffed into the large end of the cone. Bamboo was also used in making a crude kind of pipe. Conventional cigarettes and cigars did not come into general use until many years later - cigars in 1800, and cigarettes about 1830.

^{1/} Jonas, F. M., "Tobacco in Japan, Introduction and Methods of Smoking," Japanese Weekly Chronical, November 3, 1932, Tokyo, Japan.

^{2/} Comes, Orazio, Histoire, Geographie, Statistique du Tobac, p. 249, n. 2.

Tobacco had not been known in Japan very long, according to historians, until it was forbidden on the ground that "it was of no benefit to the people." The opposition was not confined, however, to its negative benefit to people in general, nor to its harmful effect on consumers; tobacco was also opposed on the ground that it was a fire hazard and that the land devoted to it would be better used for rice and other food crops. A series of prohibitions as reported by Comes ^{1/} is abridged as follows:

- 1607 - Smoking again prohibited ^{2/}; the prohibition not observed by the people.
- 1609 - Third prohibition of smoking; cultivation of tobacco also prohibited.
- 1611 - The use of tobacco again prohibited.
- 1612 - It was ordered that, (1) if anyone be caught selling tobacco, his property would be confiscated and given to the one who informed against him, (2) any man who arrested a person carrying tobacco on horseback should receive both the horse and baggage on it, (3) tobacco should not be planted anywhere in Japan.
- 1615 - A severe order was issued against the military class (where smoking was very common) confiscating the property of those who used tobacco.
- 1616 - Another order to the effect that, (1) any person who cultivated tobacco plants or sold tobacco should be imprisoned, (2) from each farmer living in the same town with a tobacco grower a fine of one sen should be collected; (3) the chief municipal officer of that town should pay a fine of 50 sen.

Many edicts prohibiting the use of tobacco followed these, but the people refused to heed them. By 1624 the smoking custom had grown to be a common practice of all classes, including the ruling class; consequently, the later laws were modified so that their only purpose was to keep the production of tobacco from encroaching on rice fields and vegetable gardens. In 1679 the law courts refused to listen to any contention against tobacco. In 1703 permission was given to grow it, but the area was cut in half. In more recent times, Government restrictions have been largely removed and the crop has been grown throughout Japan.

Early Foreign Trade

Imports of leaf tobacco and tobacco products into the Japanese Empire began at an early date but it was many years before they became significant. For Japan proper, leaf tobacco imports as recently as 1896 totaled only 325,000 pounds. The first record of importation of cut tobacco was for 1890, when 94,000 pounds were imported. Cigar imports as late as 1868 totaled only 19,000 pounds. Cigarette imports began about 1879 and totaled approximately 350 pounds. Exports in volume apparently began at a somewhat earlier

^{1/} See note 2, page 2.

^{2/} Date of the first prohibition not reported.

date. In 1868, leaf exports totaled 275,000 pounds and cut tobacco 800 pounds. In 1880 cigarettes were first exported, the total amounting to approximately 60 pounds.

In 1896 leaf imports into Taiwan totaled approximately 5,000 pounds and exports were practically nil. For Chosen the first record of leaf tobacco imports is for 1910 when 206,000 pounds were imported. The first record of exports is for 1914 when 885,000 pounds were exported.

Early Government Taxes and Control Measures

Government taxes and supervision over the tobacco industry began at a relatively early period. The early taxes levied on tobacco as well as other agricultural products were for the purpose of supporting provincial princes and chieftains. The first national tobacco tax known to have been established in the Empire, which then included only what is now Japan proper, was made effective in January 1876 and continued until the establishment of the monopoly in 1897. The tax law was modified in 1882 and again in 1888 but the changes were largely confined to the rate of tax. 1/ The tax law included a tax to be paid by wholesale and retail tobacco dealers and a stamp tax on the products themselves. A similar tax law was established in Chosen in 1909. It was modified in 1914, the most important change being the limiting of the manufacture of tobacco products to specified points. 2/

Difficulty was had in enforcing the early tax measures, and financial returns to the Government were below expectations. With increasing Government costs, additional revenues were desired from the tobacco industry and monopoly control was established.

TOBACCO MONOPOLIES

Organization

The tobacco monopolies in Japan proper, Chosen, and Taiwan, are not directly connected; however, they are all quite similar with respect to organization and general plan of management. The Japanese monopoly was the first established and when the others were started they were patterned after it. In each case the tobacco monopoly is under an overhead organization known as the Monopoly Bureau. The Monopoly Bureau in Japan proper is under the general supervision of the Ministry of Finance and has monopoly control over tobacco, salt, crude camphor, and camphor oil. In Chosen and Taiwan the Monopoly Bureaus are under the control of the Bureau of Financial Affairs of the respective Governments General. The Chosen Monopoly Bureau has control of tobacco, salt, and ginseng; and the Tiawan Bureau has control of tobacco, salt, camphor, alcoholic liquors, and opium.

The Monopoly Bureau in each case is subdivided into organizations handling each commodity. Within these subdivisions different offices are established for carrying out various activities. The activities of the

1/ Japan Trade Guide, Shimbun Rengo Sha, Tokyo, Japan.

2/ Annual Report on Administration of Chosen, 1934-35, Government General of Chosen, Keijo, Chosen.

tobacco monopolies are divided into four main sections; the supervision of the control of production, control of foreign trade of leaf tobacco and tobacco products, research bureau, and manufacturing and sales.

Date of Introduction and Development

Japan Proper

In Japan proper a monopoly law was drafted in 1885 but was not put into force until 1898 when larger revenue returns to the Government were needed to meet war indebtedness resulting from the Sino-Japanese war of 1895. At that time the monopoly extended only to leaf tobacco. It was given the exclusive right of purchasing tobacco from farmers. Purchases were made at prices previously determined for specified qualities. After the entire harvest had been bought by the monopoly, leaf was sold to manufacturers and consumers at prices materially above the farm purchase prices. In February 1899 and in April 1901 the law was modified to include the following: (1) Definite qualifications were established for persons entitled to purchase leaf tobacco from the Government; (2) imports and exports of leaf tobacco were confined to the monopoly; (3) tobacco growers were required to obtain official license for producing tobacco; and (4) authority was given the monopoly to require growers to produce tobacco of specified types.

With these changes the monopoly had complete control of leaf tobacco as regards domestic production, import, and export. Manufacturing of tobacco products was still carried on by private manufacturers but the monopoly was their only source of leaf.

In July 1904 a revised tobacco law was enacted that extended monopoly control over manufacture and sales. Private-owned factories were taken over by the Government and additional factories constructed. Sales by the monopoly were made to licensed wholesalers who, in turn, sold to licensed retailers.

In 1931 the wholesale system was abolished and the monopoly established its own marketing organization, delivering tobacco directly from the monopoly to licensed retailers.

Taiwan

The Taiwan monopoly was established on April 1, 1905, primarily for the purpose of raising funds to support the Colonial Government.^{1/} The Taiwan monopoly was organized along the same lines as the Japanese monopoly, as modified in 1904. When first organized it took complete control of leaf tobacco, its production, import, and export. The manufacture of tobacco products was for the time being let under contract by the monopoly to private concerns. It was not until 1922 that the monopoly built its own factories and began producing tobacco products.

^{1/} Shortly before this date the finances of the Colonial Government were made independent of the Tokyo government and it no longer received direct grants for its support.

Throughout the entire history of the monopoly, sales have been made through private agencies. Prior to 1928, the monopoly designated certain individuals or organizations who were allotted the privilege of wholesale trade in tobacco products. Local governmental authorities were given the power to designate retailers of products. Since 1928, however, both wholesalers and retailers have been designated by the monopoly, and the selling prices from monopoly to wholesaler, from wholesaler to retailer, and retailer to the public have been fixed by the monopoly.

Chosen

The Chosen monopoly was not established until 1921, and its history has been somewhat different from the monopolies in Japan proper and Taiwan. When first organized, it extended only to commercial production of leaf and the manufacture of cigarettes. Farmers were permitted to grow tobacco for their own use, and the manufacture of cut tobacco continued to be carried on by private concerns. The monopoly sold leaf to private manufacturers of cut tobacco as well as to consumers who smoked unprocessed leaf. In 1922 the monopoly began manufacturing cut tobacco but did not restrict its manufacture by private individuals. In 1929 complete monopoly control was established. Manufacture of cut tobacco and sales of leaf to individuals and organizations in Chosen were eliminated, and cultivation of tobacco for home consumption was prohibited.

Prior to 1931, sales of tobacco products were made through private wholesale and retail organizations, which were licensed by the monopoly. In 1931, the monopoly established its own wholesale and distributing organizations and since that date sales have been made direct to licensed retailers. Retail and wholesale prices for tobacco products have always been fixed by the monopoly.

Present Extent and Method of Monopoly Control

At present all of the Monopoly Bureaus have complete control over tobacco from the time the seeds are planted until the finished products reach consumers. They operate on the principle that the tobacco farmer is a member of the monopoly organization. The farmer is required to spend a definite amount of money and time in producing tobacco for which the monopoly pays prescribed prices. Each monopoly also guarantees a fixed payment per acre in the event of total or partial crop failure resulting from storms, floods, etc. The guaranteed payments are a fixed percentage of a value derived by multiplying the grower's average tobacco yield during several past years by the average price he received for his tobacco during the immediate preceding years.

Control over farm production is maintained through tobacco associations. Each village or, in some cases, a group of small villages, has a tobacco association. The only officers of an individual association are the "headman" ^{1/} of the village, who serves without compensation, and a tobacco

^{1/} The social structure in Japan is organized along family lines as in China. A family includes the oldest living male member and all his children and grandchildren. Villages are usually the outgrowth of one family, and the oldest male resident in the village is usually the "headman." He settles all disputes and has a general control over the activities of the entire village.

supervisor or instructor. The tobacco instructor is designated by the monopoly but his salary is paid by the association out of dues collected from its members.

Each year the monopoly determines the total acreage to be planted to tobacco of different types. The acreage for each type is then prorated among the different tobacco associations in accordance with their previous allotted acreage and the amount of land owned by members of the association that is suitable for production of the type. The allotted acreage of an association is subdivided among its members in proportion to their previous allotment and the amount of suitable land they own. Each producer is given a license, which permits him to grow a fixed acreage of tobacco on a certain farm. In case the farm is sold the license remains with the land. 1/

Seed of the type of tobacco desired for production is furnished to the farmer by the monopoly. Dates when seed beds are to be planted, when plants are to be transplanted to fields, when they must be topped, and when harvesting should be begun, are all fixed by the monopoly. Cultural, harvesting, and curing practices are established by the monopoly. Seed beds must be prepared according to specified rules. When transplanted into fields, the plants must be set in rows of specified widths and at certain distances apart within the rows. The quantity and dates of application of different types of manure and fertilizer to be applied are also fixed by the monopoly. Methods of curing are laid down. After curing, the tobacco must be carefully graded and hands must be prepared in a prescribed manner with a fixed number of leaves in each hand. The hands of different grades or quality must be made into a bundle of a prescribed size. Even the material to be used for wrapping and tying the bundle is prescribed. Tobacco instructors employed by associations are always on hand to see that these rules and regulations are carried out. If a farmer fails to follow instructions his license to produce tobacco is revoked.

The farmer's crop can be sold only to the monopoly. Prices for different types and grades of tobacco are fixed in advance, usually in December preceding the year the crop is produced. If a farmer's tobacco is not graded and packed according to monopoly regulations, the monopoly refuses to purchase it and the farmer is required to regrade and repack it.

After leaf reaches the hands of the monopoly it remains in their possession until sold in the form of retail products, or exported as leaf. The redrying, storage, manufacture, and sales to retailers are all carried out by the monopoly.

TOBACCO PRODUCTION

Production Trends and Types Grown

The average annual production of tobacco in the Japanese Empire for the years 1933 to 1937 was about 191,000,000 pounds, of which approximately 133,000,000 were domestic types and 58,000,000 pounds American flue-cured

1/ The income from tobacco production is higher than that from other crops and premium prices are always offered for land for which a license to grow tobacco has been issued.

type. Average production for the years immediately preceding and following 1900, when records were first available, was about 85,000,000 pounds and was entirely domestic types. Flue-cured production began in 1902. By 1920 total production had increased to approximately 160,000,000 pounds, of which about 8,000,000 pounds were flue-cured. In 1930 the total production was 187,000,000 of which flue-cured represented 22,000,000 pounds, and in 1938 total production was estimated at 207,000,000 pounds and flue-cured at 80,000,000 pounds.

Table 1. - Area and production of tobacco in the Japanese Empire,
1921 to 1938

Area and year	Total tobacco		Flue-cured		Native	
	Area	Production	Area	Production	Area	Production
	: Acres	: pounds	: Acres	: pounds	: Acres	: pounds
<u>Japan</u>	:	:	:	:	:	:
1921.....	92,141	134,899	3,860	3,889	88,281	131,010
1922.....	96,809	153,364	3,801	5,624	93,008	147,740
1923.....	95,792	136,115	3,794	3,979	91,998	132,136
1924.....	94,776	140,567	4,109	5,582	90,667	134,985
1925.....	91,446	143,426	4,941	8,241	86,505	135,185
1926.....	90,246	138,483	6,700	9,813	83,546	128,670
1927.....	91,260	150,323	8,457	14,191	82,803	136,132
1928.....	92,161	140,435	9,732	15,891	82,429	124,594
1929.....	88,326	136,212	10,156	15,714	78,170	120,498
1930.....	89,033	150,183	10,555	17,044	78,478	133,139
1931.....	90,273	150,710	13,234	21,826	77,039	128,834
1932.....	83,542	133,611	18,282	23,669	65,260	109,942
1933.....	83,656	146,694	27,632	40,271	56,024	106,423
1934.....	84,617	145,452	28,578	44,626	56,039	100,826
1935.....	86,048	142,262	33,075	51,288	52,973	90,974
1936.....	86,638	133,356	36,479	48,893	50,159	84,463
1937.....	85,546	140,502	39,346	62,163	46,200	78,339
1938.....	92,664	142,269	44,379	65,056:a/	48,285:b/	77,213
<u>Chosen c/</u>	:	:	:	:	:	:
1921.....	40,925	30,308	2,783	3,430	38,142	26,878
1922.....	30,121	23,244	2,290	2,279	27,831	20,965
1923.....	31,350	25,219	2,932	3,505	28,418	21,714
1924.....	40,166	34,923	3,102	4,998	37,064	29,925
1925.....	40,833	30,319	3,800	3,988	37,033	26,331
1926.....	40,470	28,719	3,429	4,283	37,041	24,436
1927.....	46,670	41,892	3,517	5,826	43,153	36,066
1928.....	53,594	49,844	3,711	6,878	49,883	42,966
1929.....	48,063	57,180	3,756	7,221	44,307	49,959
1930.....	34,868	33,292	3,445	4,540	31,423	28,752
1931.....	37,329	36,245	3,958	6,642	33,371	29,603
1932.....	33,420	43,898	3,983	7,024	29,437	36,874
1933.....	33,225	36,494	3,953	5,768	29,272	30,726
1934.....	36,007	33,960	4,416	7,055	31,591	26,905
1935.....	40,110	48,327	4,419	7,063	35,691	41,264
1936.....	42,966	45,474	5,121	7,640	37,845	37,834
1937.....	45,755	58,838	6,463	9,126	39,292	49,712
1938.....	47,924	58,000	7,820	11,000	40,104	47,000

Continued -

Table 1. - Area and production of tobacco in the Japanese Empire,
1921 to 1938 -Continued

Area and year	Total tobacco		Flue-cured		Native	
	Area	Production	Area	Production	Area	Production
Taiwan	: : : : : : :	1,000 : : : : : : 1,000	: : : : : : :	1,000 : : : : : : 1,000	: : : : : : :	1,000 : : : : : : 1,000
1921.....	3,284:	4,270:	415:	411:	2,869:	3,859
1922.....	2,921:	3,755:	454:	613:	2,467:	3,142
1923.....	2,562:	3,611:	394:	579:	2,168:	3,032
1924.....	2,318:	2,836:	324:	360:	1,994:	2,476
1925.....	1,762:	2,204:	317:	298:	1,445:	1,906
1926.....	1,740:	2,202:	320:	318:	1,420:	1,884
1927.....	2,036:	2,735:	346:	326:	1,690:	2,409
1928.....	2,204:	3,310:	386:	402:	1,818:	2,908
1929.....	2,197:	3,326:	435:	452:	1,762:	2,874
1930.....	2,026:	3,316:	434:	460:	1,592:	2,856
1931.....	1,873:	2,796:	410:	390:	1,463:	2,406
1932.....	1,789:	2,821:	404:	489:	1,385:	2,332
1933.....	1,917:	3,386:	534:	629:	1,383:	2,757
1934.....	2,278:	4,719:	815:	1,076:	1,463:	3,643
1935.....	2,619:	4,487:	1,115:	1,262:	1,504:	3,225
1936.....	3,012:	4,885:	1,651:	1,936:	1,361:	2,949
1937.....	3,590:	5,713:	2,383:	2,885:	1,207:	2,828
1938.....	4,101:	6,360:	2,814:	3,527:	1,287:	2,833
Total Empire	: : : : : : :	: : : : : : :	: : : : : : :	: : : : : : :	: : : : : : :	: : : : : : :
1921.....	136,350:	169,477:	7,058:	7,730:	129,292:	161,747
1922.....	129,651:	180,363:	6,545:	8,516:	123,306:	171,847
1923.....	129,704:	164,945:	7,120:	8,063:	122,584:	156,882
1924.....	137,260:	178,326:	7,535:	10,940:	129,725:	167,386
1925.....	134,041:	175,949:	9,058:	12,527:	124,983:	163,422
1926.....	132,456:	169,404:	10,449:	14,414:	122,007:	154,990
1927.....	139,966:	194,950:	12,320:	20,343:	127,646:	174,607
1928.....	147,959:	193,639:	13,829:	23,171:	134,130:	170,468
1929.....	138,586:	196,718:	14,347:	23,387:	124,239:	173,331
1930.....	125,927:	186,791:	14,434:	22,044:	111,493:	164,747
1931.....	129,475:	189,751:	17,602:	23,858:	111,873:	160,893
1932.....	118,751:	180,330:	22,669:	31,182:	96,082:	149,148
1933.....	118,798:	186,574:	32,119:	46,668:	86,679:	139,906
1934.....	122,902:	184,131:	33,809:	52,757:	89,093:	131,374
1935.....	128,777:	195,076:	38,609:	59,613:	90,168:	135,463
1936.....	132,616:	183,715:	43,251:	58,469:	89,363:	125,246
1937.....	134,891:	205,053:	48,192:	74,174:	86,699:	130,879
1938.....	144,689:	206,629:	55,013:	79,583:a/	89,676:b/	127,046

Total tobacco acreage and production for 1921 to 1937 compiled from Résumé Statistique de l'Empire du Japon; Statistical Abstract of the Ministry of Agriculture and Forestry; acreage and production of flue-cured and native types for 1921 to 1937 from reports of Empire monopolies. For 1938 the estimates for Japan proper and Chosen are preliminary estimates from the monopolies in the respective areas; estimates for Taiwan are by Shanghai office, Office of Foreign Agricultural Relations.

a/ Includes 1,468 acres of American-type burley. b/ Includes 1,943,000 pounds of American-type burley. c/ Acreage and production of native types include small amounts of Turkish tobacco for the years 1921 to 1927, and for all years some Japanese types.

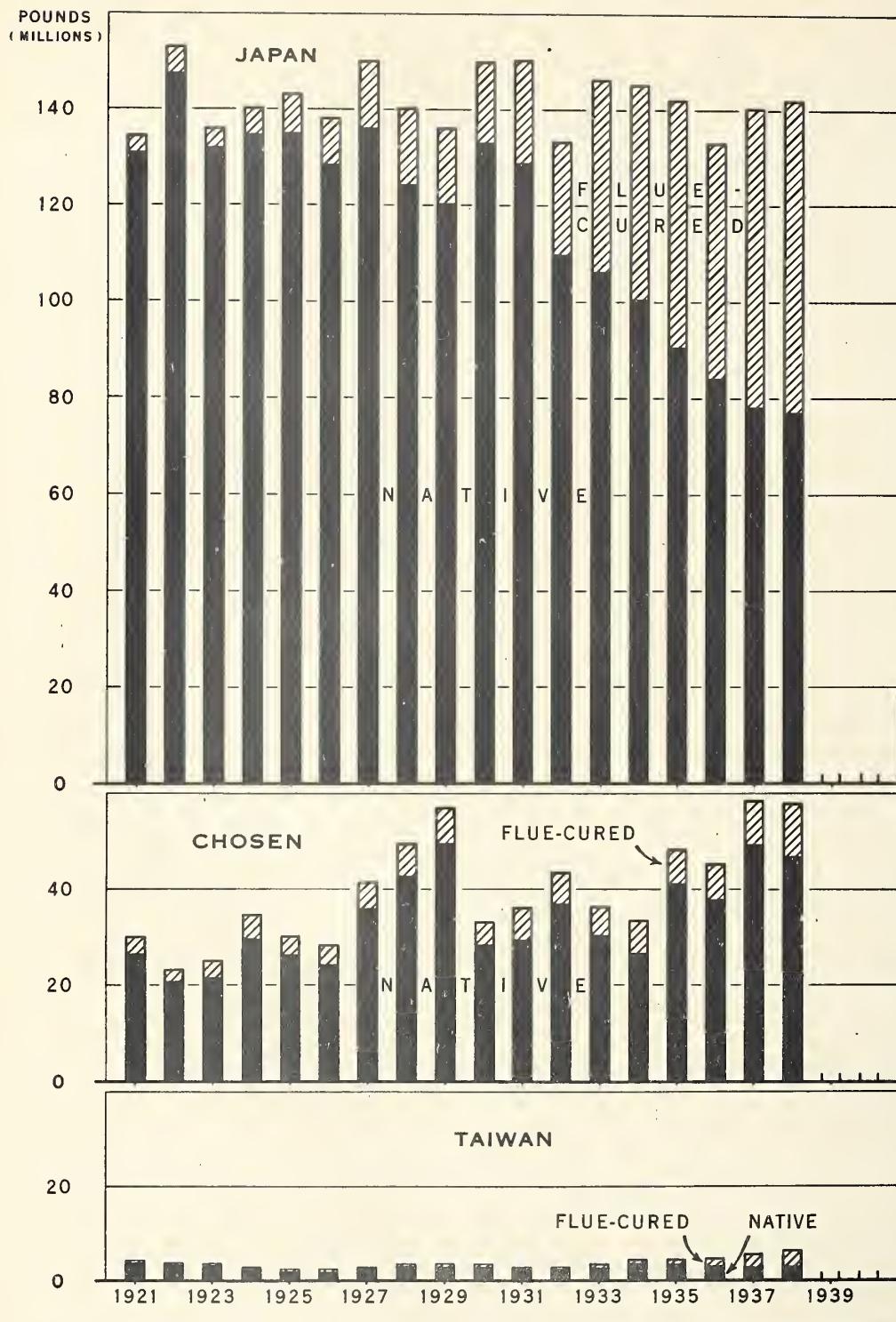


Fig. 1. - Relation of flue-cured and native-type tobacco to the total production in the Japanese Empire.

The rapid expansion in recent years in flue-cured production and the decline in production of domestic types have resulted from a shift in demand for leaf used in domestically produced foreign-type cigarettes. Tobacco growers in certain districts have been required to shift part of their acreage of domestic types of flue-cured, and new districts have been opened for flue-cured production.

Production is carried on by numerous small producers. At present there are approximately 320,000 growers with an average acreage per farmer of about 0.4 acre. Human labor is abundant and hand methods are used almost exclusively. Great care is taken to insure high yields. The average tobacco yield is approximately 1,500 pounds per acre as compared with the average yields in the United States in recent years of about 850 pounds.

For many years the production of tobacco has been on a strictly commercial basis as contrasted with the practice in China and certain other oriental countries where the farmer in most instances grows tobacco for his own consumption or for sale in his immediate community. For many years, and particularly since the establishment of tobacco monopolies, Japanese Empire farmers have sold their entire production, processing being done exclusively by monopolies or commercial agencies.

Factors That Have Resulted in the Development of Types

Tobacco in the Japanese Empire has been carefully classified by Japanese authorities into several groups and types. A relatively large number of distinctive types has resulted from the plant having been introduced from several different sources, promiscuous crossing of different types and varieties before monopoly control was established, and wide variations in types of soil, climate, and cultural practices.

Area and Topography

The land area of the Japanese Empire with its numerous islands and Asiatic mainland is approximately as large as Texas, or about 260,000 square miles. If the islands of Japan proper were transplanted into the Atlantic Ocean about the same distance from the mainland as it is from the Asiatic Coast, they would extend from the southern end of Labrador to Cuba. If the Pacific mandated islands, which are farther east than the rest of the Empire, are included, the Empire would extend to the equator or as far south as the Amazon River.

If Chosen on the Asiatic mainland were transplanted to the Atlantic Coast, it would roughly correspond to a peninsula similar to Florida but about one-half larger, connecting on the mainland of the United States from southern Maine, to Connecticut and extending in the Atlantic Ocean as far south as Norfolk, Virginia. Kwantung Leased Territory is a small peninsula extending from southern Manchuria and is on about the same latitude as New York City.

The islands of the Empire are a series of mountain peaks or ranges rising from the ocean floor. There are thousands of these islands (the Empire proper excluding the southern mandated islands and a large number of

northern islands ceded by Russia includes over 4,000 islands) varying in size from mere reefs to Honshu, which has approximately the same area as the State of Minnesota. The mountain peaks and ranges that form the land areas are cut with narrow valleys and their bases bordered with rolling hilly country extending to narrow coastal plains. Chosen on the mainland is a mountain range running from north to south, cut by small narrow valleys in the north, somewhat broader valleys in the south, and bordered on the south and west by relatively narrow coastal plains.

Tobacco production in the Empire is largely confined to the principal islands comprising Japan proper, and to Chosen and Taiwan. It is produced in numerous districts extending from about 22° north latitude to 40° north latitude or a distance of over 1,200 miles.

Soils

There is a wide range in soil types in the tobacco producing districts of the Japanese Empire. Many of the soils originated from volcanic ash and are peculiar to Japan. The ruggedness of the country, its numerous streams, and the results of earthquake and volcanic disturbances have so diffused the different soil types that areas of distinct soils are small. Thus it is impossible to characterize the soils of extensive areas, and as a result of their differences, tobacco produced within a limited area is in some cases of two or more types. The monopolies have made detailed studies of soils in the tobacco-producing districts, and the allocation of areas to be used for the production of different types of tobacco is made in accordance with soil types.

Climatic Regions

The mainland of Japan proper can be roughly divided into three climatic regions all of which have more rainfall than any of the principal tobacco-producing States of the United States. The annual average rainfall in two of the regions is above 70 inches and in the other about 55 inches. There is a wide difference between the regions in the distribution of rainfall through the year, due to their position in relation to moisture-laden winds.

The average annual and monthly temperatures for the three regions do not vary widely. They compare roughly with an average for the east coast weather stations of the United States extending from New Jersey to Norfolk, Virginia.

The climates of Chosen and Taiwan are quite different from that of the Japanese mainland. Chosen is the coldest and most arid section of the Empire but, even so, has an average annual rainfall and temperature that compare roughly with those of the State of Illinois. Taiwan has a typical semitropical climate with an average annual temperature approximately equal to that of southern Florida but an annual rainfall higher than in any section of continental United States.

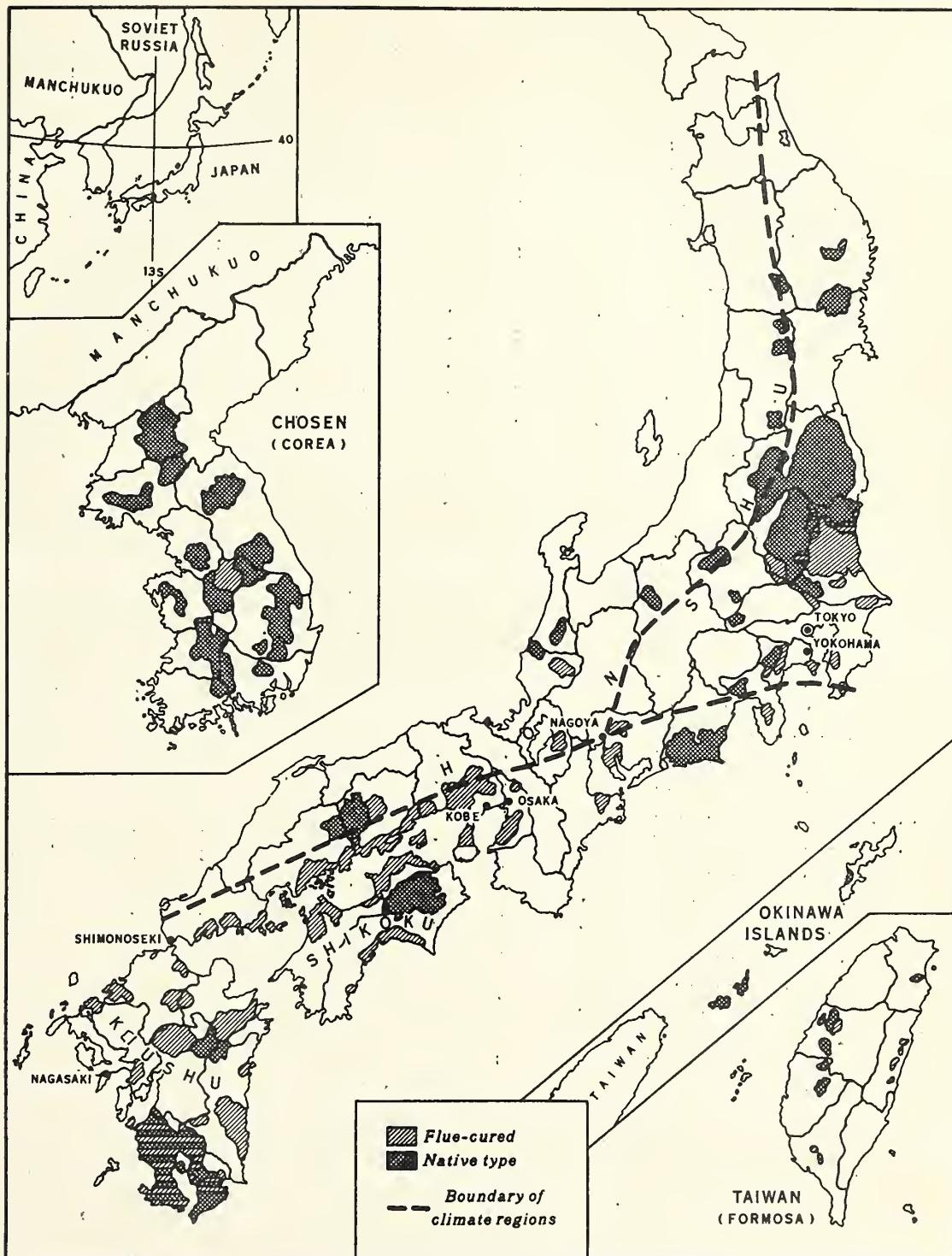


Fig. 2. - Flue-cured and native tobacco districts of the Japanese Empire; and boundary of climate regions in Japan proper.

Table 2. - Average monthly and average annual rainfall and temperature by climatic regions of the Japanese Empire

Month	Rainfall					
	Japan Proper			Chosen		Taiwan
	North- western	North- eastern	Southern			
	Inches	Inches	Inches	Inches	Inches	Inches
January.....	8.29	2.00	2.52	1.14		1.62
February.....	6.21	2.77	3.02	1.08		2.44
March.....	5.50	3.45	5.08	1.38		3.07
April.....	4.56	4.41	6.72	2.72		3.84
May.....	4.40	5.25	7.04	3.38		7.97
June.....	5.83	5.92	10.77	4.52		12.00
July.....	6.73	5.52	8.84	9.14		12.49
August.....	5.68	6.81	7.48	7.79		15.00
September.....	8.54	8.81	10.22	5.35		9.06
October.....	6.61	6.57	6.43	2.27		4.34
November.....	7.54	3.01	3.50	1.70		1.53
December.....	10.10	2.13	2.57	.95		1.32
Annual.....	79.99	56.65	74.19	41.42		74.68
Temperature						
	Degrees Fahrenheit	Degrees Fahrenheit	Degrees Fahrenheit	Degrees Fahrenheit	Degrees Fahrenheit	Degrees Fahrenheit
January.....	35.2	34.0	41.2	22.6		63.5
February.....	35.4	35.6	41.9	26.4		63.0
March.....	40.3	40.3	46.9	36.0		67.3
April.....	50.9	51.1	56.5	48.7		72.9
May.....	59.2	58.6	63.9	57.9		77.5
June.....	67.1	65.7	70.7	66.4		80.4
July.....	74.8	72.9	77.7	73.4		81.9
August.....	77.4	75.6	79.7	75.2		81.3
September.....	70.0	69.1	73.8	66.2		79.5
October.....	58.6	57.9	63.3	54.9		75.6
November.....	48.9	47.7	53.8	40.5		70.5
December.....	39.6	38.3	45.0	27.3		65.5
Annual.....	54.8	53.9	59.5	49.6		73.2

Compiled from the Climatic Atlas of Japan, Japanese Meteorological Bureau.

Northwestern Japan: This region extends north and west of the city of Nagoya and is all on the west side of the mountain range that forms the backbone of the mainland. It is influenced by winter monsoons blowing south-easterly from Siberia that bring heavy rains from the Japan Sea, and relatively low temperatures. It is largely shut off by mountains from the influence of the summer monsoons blowing from the south. Summers are relatively hot and rainfall lower than in winter months. The monthly average rainfall is highest from November through January, when averages vary from about 7.5 to 10.0 inches, and lowest in April and May, when they are down to about 4.5 inches. Temperature in the region differs widely as a result of variations in altitude, but monthly averages range from around 35° F. in

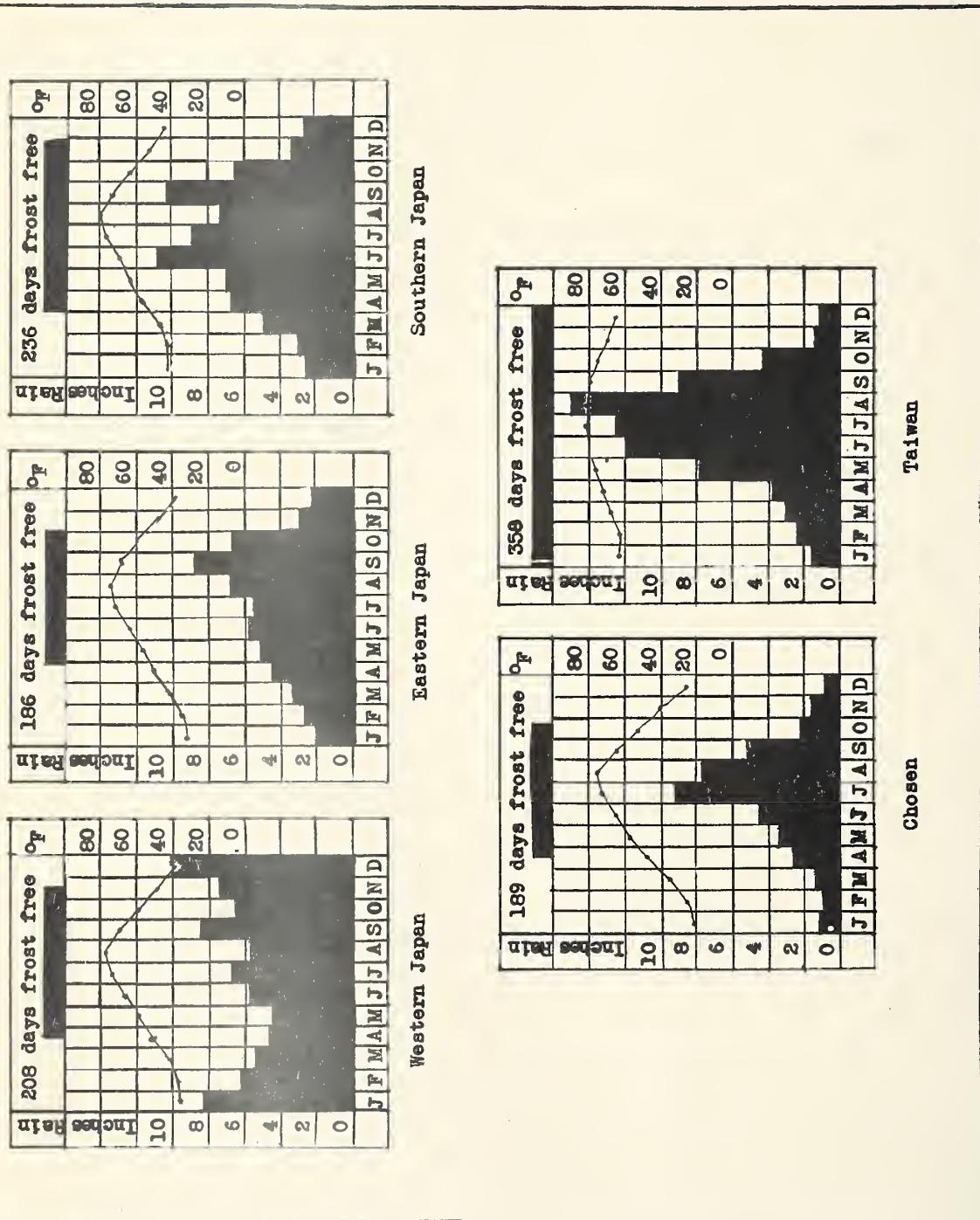
January and February, the coldest months, to 75°F. or above in July and August. The average growing season is 208 days, approximately equal to that at Harrisburg, Pennsylvania, and extends from April 19 to November 13.

Northeastern Japan: This region is on the east coast of Japan, north of Tokyo and is largely shut off by mountains from the influences of both the winter and summer monsoons. It is the driest section of the mainland but, even so, has an average annual rainfall of over 55 inches. Rainfall is lowest in the winter months November to February when monthly averages vary from 2 to 3 inches. It increases from March to September, which is the wettest month with an average of 8.8 inches. Temperature differs widely with altitude but varies from an average of 35°F. for the cold months December through February to 70°F. and above for July and August. The growing season is shorter than for other regions on the mainland and averages 186 days, which is approximately equal to the season at Springfield, Illinois. The average season extends from April 27 to October 30.

Southern Japan: This region includes the southern portion of the Japanese mainland. It is largely shut off by mountains from the influence of the northern monsoons, but most districts in the region receive the full influence of the summer monsoons and the warming effect of the Japanese current. Monthly average rainfall in the region varies from around 3 inches for the months November through February to over 10 inches for the 2 rainy months June and September. Temperature averages somewhat higher than for the other regions on the mainland and ranges from around 45°F. for the months December through March to near 80°F. in July and August. The average growing season is 236 days, which is about equal to that at Norfolk, Virginia, and extends from April 1 to November 23.

Chosen: The climate of Chosen is influenced by the winter monsoons, which bring cold weather but little precipitation due to the fact that they are direct from the arid regions of Siberia. Most of the rainfall comes with the summer monsoons. Rainfall varies from around 1 inch from December through March to over 9 inches in the wet month of July. Temperature averages around 25°F. during December through February but reaches about 75°F. in July and August. The average growing season is 189 days, which is approximately equal to that at Springfield, Illinois, and extends from April 17 to October 23.

Taiwan: With the exception of the extreme northern tip of the island, Taiwan receives little influence from the winter monsoons. The climate throughout the year over most of the island is largely influenced by the summer monsoons and the warming effect of the South China Sea. Rainfall is low in winter months, averaging around 1.5 inches from November through January, but averages 12 to 15 inches during the rainy months, June to August. Temperature differs widely with variations in altitude but in most of the agricultural districts there is a continuous growing season. The average monthly temperature ranges from around 65°F. from December through February to over 80°F. in June, July, and August. The average growing season is 358 days, extending from January 8 to January 3.



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Fig. 3. - Frost-free period, monthly average temperature, and rainfall in climatic regions of the Japanese Empire.

Table 3. - Growing seasons in the climatic regions
of the Japanese Empire

Region	Reporting stations	Growing season a/					
		Number	Latest spring frost	Date	First fall frost	Date	Days between frosts
Northwestern Japan...	11		April 19		November 13		208
Northeastern Japan...	10		April 27		October 30		186
Southern Japan.....	20		April 1		November 23		236
Chosen.....	10		April 17		October 23		189
Taiwan b/	5		January 8		January 3		359
			:	:	:	:	

Climatic Atlas of Japan, Japanese Meteorological Bureau.

a/ Average date of last spring frost reported, average date of first fall frost reported, and number of frost-free days between average dates.

b/ Three of five stations were free of frosts, and the other two reported 346 and 356 days between frosts.

Cultural Practices

As has been previously mentioned, the growing of tobacco in the Japanese Empire is at present closely supervised and cultural practices standardized by the monopolies. Motion picture films and literature are provided for the purpose of instructing producers just how each operation in producing, curing, grading, and preparing tobacco for market should be carried out.

In Japan proper, cultivation is almost entirely by hand, and in Chosen and Taiwan, probably as much as 50 percent of the crop is cultivated entirely by hand. Most farmers, especially those in Japan proper, have no work animals or machinery. Soil is cultivated entirely with hoes. Even the original breaking of the land is accomplished with large grubbing hoes. Transportation in the rural districts is limited almost entirely to hand-pulled carts. In certain districts the monopolies require tobacco growers to purchase hand sprayers for insect control. In many instances, however, sprayers are not used as farmers find it cheaper to pick insects by hand.

Crop Rotation

In Japan proper and Taiwan, where population is dense and land scarce and high-priced, two or three crops are obtained from the same land each year. All crops including small grains are planted in rows and are cultivated and weeded. Before a crop is harvested the next crop of a different product is frequently interplanted between the rows. In certain sections of Chosen where land is more plentiful, close cultivating is not so essential and some crops, particularly tobacco, do not immediately follow another crop.

In Japan proper the monopoly permits four different crop rotations for tobacco farms. The different rotations permit the planting of tobacco on the same land 1 year out of 3, every other year, 2 years out of 3, and every year. Where practicable the rotation permitting tobacco only 1 year out of 3 is prescribed. The year-after-year rotation is not permitted except in limited areas. Tobacco always follows barley in the rotation systems, and tobacco plants are transplanted into fields before barley is harvested (see figure 5).

The crops most generally used in the four different rotations and the order in which they come are as follows: 1/

	<u>Spring</u>	<u>Summer</u>	<u>Fall</u>
3-YEAR:	Tobacco once in 3 years.	:	:
First year:	Wheat harvested	Upland rice, soybeans, or sweetpotatoes grown and harvested	Wheat planted
Second year:	Wheat harvested	Upland rice, soybeans, or sweetpotatoes grown and harvested	Barley planted
Third year:	Barley harvested	Tobacco grown and harvested	Wheat planted
2-YEAR:	Tobacco every other year.		
First year:	Wheat harvested	Upland rice, soybeans, or sweetpotatoes grown and harvested	Barley planted
Second year:	Barley harvested	Tobacco grown and harvested	Wheat planted
3-YEAR:	Tobacco 2 years out of 3.		
First year:	Wheat harvested	Upland rice, soybeans, or sweetpotatoes grown and harvested	Barley planted
Second year:	Barley harvested	Tobacco grown and harvested	Barley planted
Third year:	Barley harvested	Tobacco grown and harvested	Wheat planted
1-YEAR:	Tobacco every year.		
Each year:	Barley harvested	Tobacco grown and harvested	Barley planted

Seedbeds

In all tobacco districts of Japan proper, Taiwan, and most of Chosen, tobacco seedbeds are prepared above ground. This is necessary as a result of the heavy and relatively cold spring rains. The sidewalls of the beds, which vary in height from 10 to 20 inches, are built of timbers and rice straw.

1/ The summer crops of upland rice, soybeans, sweetpotatoes, and tobacco are interplanted with wheat or barley in the spring months.

Fig. 4. - Planting tobacco with a perforated cylinder.

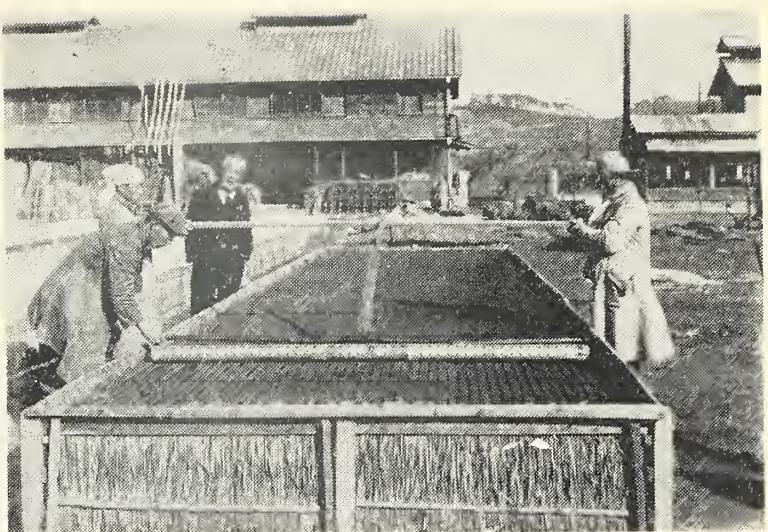


Fig. 5. - Transplanting tobacco in Japan between rows of barley.

Fig. 6. - Tobacco and other crops on Japanese hillside terraces, showing the close utilization of land.

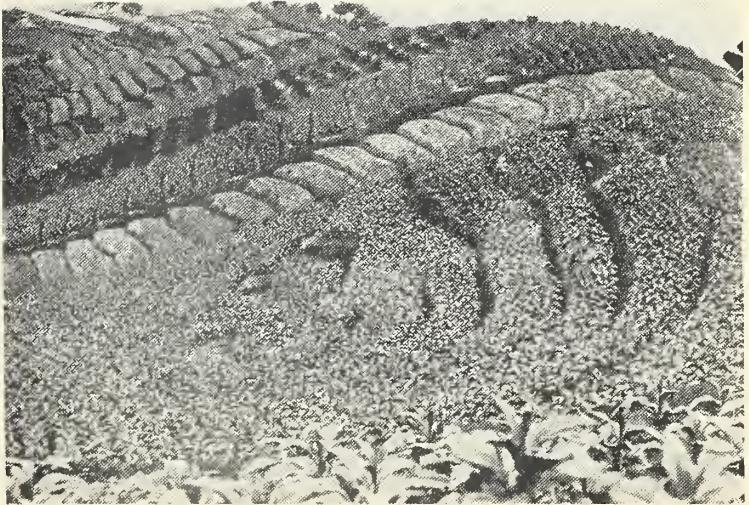


Fig. 7. - Cultivation of tobacco
after barley is harvested
in Japan.

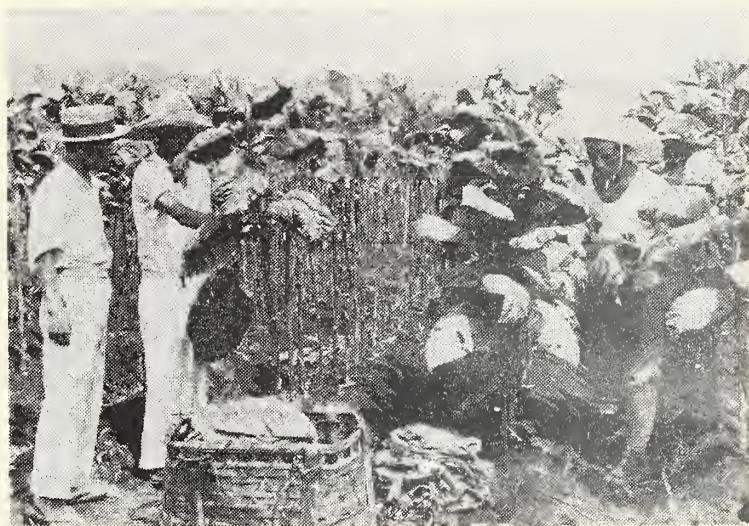


Fig. 8. - Priming native
Japanese tobacco for
ren-curing.

Standard widths are prescribed but the length varies with the number of plants required. Decomposed leaves and other compost are first placed in the bed. It is covered with a layer of straw, then a layer of soil which is covered with a light dressing made from decomposed compost, night soil, and bean-cake.

The seedbeds are planted with a perforated cylinder filled with fine sand in which seeds have been mixed. When the cylinder, which is the width of the seedbed, is rolled over the bed, seed and sand escape through the perforations and are pressed into the soil by the weight of the cylinder (figure 4). After planting, the beds are covered with cloth. Much care is given to watering, weeding, and cultivating the plants in the seedbeds. It is necessary that they be planted early and cultivated in the beds as long as possible so that the period of growth after transplanting in the fields can be accomplished before the planting date of the next crop to follow. They are usually not transplanted until they have from 8 to 10 leaves.

Transplanting, Cultivating, and Topping

After fields are carefully prepared the seedlings are transplanted in rows that vary in width for the different types from 21 to 41 inches. The distance between plants in the row varies from 8 to 18 inches. In all parts of the Empire flue-cured types are set in rows 36 to 41 inches apart with 18 to 18.5 inches between plants, which makes between 8,200 and 9,400 plants per acre. In Japan proper, where land is scarce, native types of tobacco that produce small- to moderate-sized plants are set very close. The number of plants per acre for native types ranges from around 14,000 to as high as 30,000 depending upon the type of tobacco and quality of leaf desired. In Chosen where land is more plentiful, and in Taiwan where native types produce much larger plants than in Japan proper, planting is not so dense.

Immediately after transplanting, the plants are carefully watered and tended to insure a continuation of growth. If they are planted between rows of barley, which is the general practice, and the barley shades the plants, the heads of barley are tied in bunches to permit sun to reach the tobacco plants. If the growth of barley is heavy and there is danger of it falling on the tobacco, it is supported by light bamboo frames set on either side of the rows.

Cultivating is usually carried on entirely by hand and consists of from three to five hoeings and weedings. In most of the districts the plants are hilled up in the process of cultivation to a height of about 10 inches (see figure 7). Topping is done between prescribed dates and after the plant has developed the number of leaves necessary for producing the quality desired.

Fertilizers

All types of tobacco receive fertilizer in some form. The most common fertilizers used are decomposed manures, oilseed cakes, rice bran, wood ashes, and superphosphates. The following tabulation shows for Japan proper the leading fertilizers used and the range in quantity applied per acre on native and flue-cured types:

Type of fertilizer	Native Pounds per acre	Flue-cured Pounds per acre
Decomposed manures and other compost	8,135 - 13,016	6,508 - 9,762
Oilseed cake, soybeans, rape-seed, or cottonseed	0 - 4,783	651 - 2,115
Rice bran	0 - 1,562	0 - 0
Wood ashes	195 - 1,627	976 - 1,627
Superphosphates	0 - 98	0 - 325

Other fertilizers that are used only to a limited extent include fresh barnyard manure, sewage, sediment from fermentation of wines, bonemeal, fish meal, sulphate of potash, and sulphate of soda. All fertilizers are applied during the growing season. The first application, which is limited to manures and beancake, is made at the time of transplanting. Other applications follow as the plants develop.

In general, flue-cured tobacco receives less manure than that applied to native types but receives more oilseed cake, wood ashes, and chemical fertilizers. Chemical fertilizers are used in limited quantities on only a few of the native types.

Harvesting and Curing

Most Japanese Empire tobacco is primed. Stalk-cutting is limited to less than 15 percent of the crop and where it is practiced the lower leaves, which ripen first, are primed before the stalks are cut.

Curing practices that have been carefully worked out by the monopolies are classified as: ren-curing, kan-curing, flue-curing, fire-curing, air-curing, and frame-curing. There follow descriptions of each type of cure, including a table on pages 26 to 28 classifying the various types of Japanese tobacco according to Japanese standards.

Ren-curing: Ren-curing is the method most widely used and is a combination of sun- and air-curing. The leaves are primed and for some types wilted before stringing. They are strung by fastening the stem ends between twisted cords and are then hung exposed to the sun on a framework of poles (see figure 9). During rainy periods and at night when a heavy dew is expected, they are protected by a roofing of straw matting laid over the pole framework.

After the leaves are practically dry, and before continued sunning has caused them to lose their color and aroma, they are moved to an air-curing barn or shed. They remain in the shed until the stems of the leaves are completely dry. In some cases where atmospheric conditions are damp, charcoal fires are used during the air-curing period. Before packing, the leaves are again carried into the open and laid on the ground on straw mats and each side sunned alternately to insure complete drying (see figure 10).

Fig. 9. - First sunning process in ren-curing Japanese tobacco.

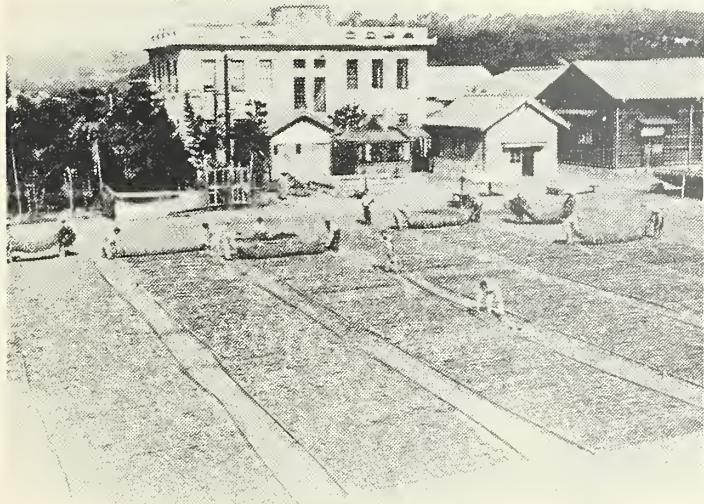
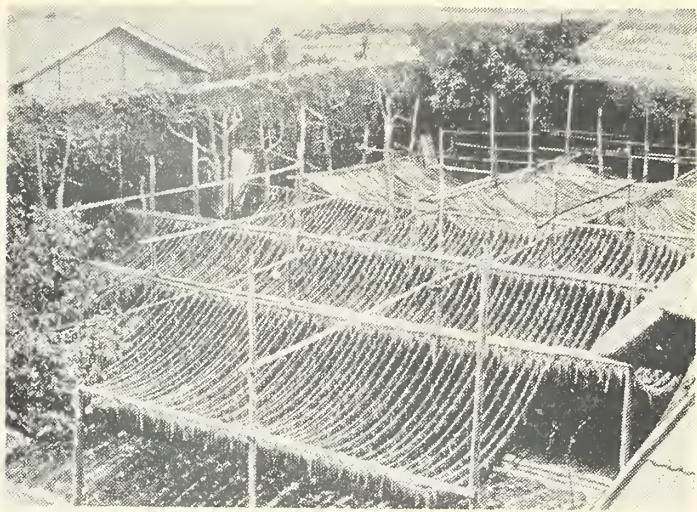


Fig. 10. - Ren-cured tobacco being sunned prior to packing.

Fig. 11. - Standard Japanese flue-curing barn.



Fig. 12. - Preparing a native-type Japanese tobacco for market.

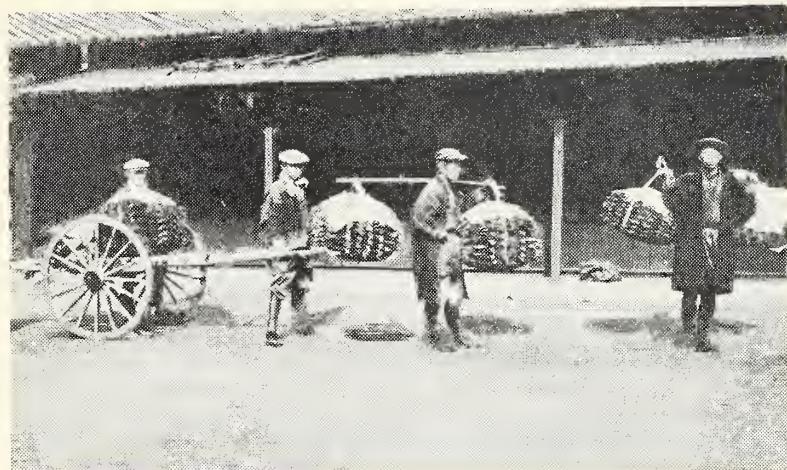
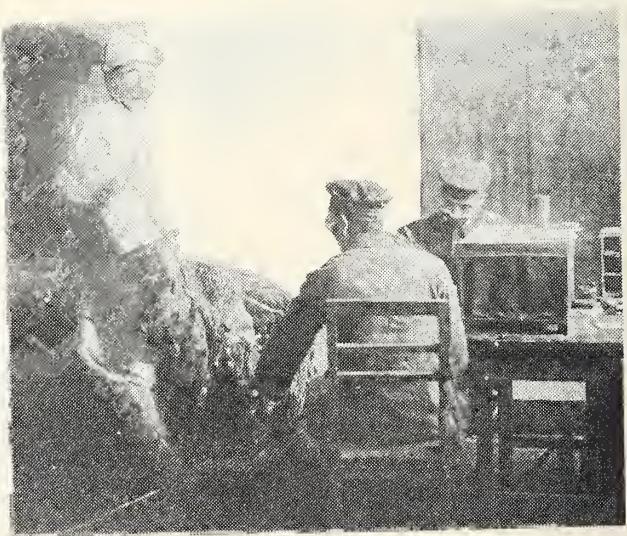


Fig. 13. - Delivering tobacco to market.

Fig. 14. - Grading, pricing, and weighing flue-cured leaf at Japanese monopoly buying station.



Kan-curing: Kan-curing is actually an air-curing process used in the curing of stalk-cut tobacco, and is quite similar to air-curing as practiced in the United States, the chief difference being in the type of barn used and methods of hanging. The barns are usually relatively low, straw-covered sheds with ventilated sidewalls of either wood or straw. The tobacco is hung in the shed by a large spike driven through the butt end of the stalk and stuck in the straw roof. If excessive dampness endangers the leaves during the curing period, charcoal fires are made on the floor of the barn.

Flue-curing: Flue-curing practices followed in the Japanese Empire are essentially the same as those used in the United States. One noticeable difference is the standardization of barns. Types of barns used are fixed by monopolies. Those most commonly used consist of two units under the same roof, with a pit between them, from which the flues in the separate units are fired. Metal flues are used and controllable air ventilators are built in at the foundations and on the roofs of the separate units (see figure 11). Coal is used for heating, and temperatures are carefully regulated during the curing process.

Fire-curing: Curing exclusively by fire is limited to three native types of tobacco in Japan proper for which the production is very limited. The tobacco is stalk-cut after the bottom leaves have been primed for re-curing and is hung in the same manner as for air-curing. The barns are closed but well ventilated, and either wood or charcoal fires are used.

Air-curing: Curing entirely by air is confined to one cigar-type tobacco grown in Taiwan. Methods followed are similar to those used in curing Puerto Rican cigar leaf. The tobacco is primed, strung, and hung in well-ventilated barns.

Frame-curing: Frame-curing is limited to the curing of Chinese-type tobacco in Taiwan. It is a method of sun-curing of primed tobacco. After priming, the leaves are placed between large rectangular bamboo frames about 6 by 12 feet. The frames of leaves are placed parallel to each other and the two top sides brought together forming a gabled-roof effect. The two sides are exposed alternately to the sun to insure uniform curing. The frames of leaves are placed under cover during rainy periods and at night to prevent damage from moisture.

Classes and Types of Japanese Empire Tobacco

Tobacco of commercial importance in the Japanese Empire has been classified by Japanese authorities into 19 different classes, which are subdivided into 44 types. Many of the types are very similar in general appearance, but most of them have distinguishing qualities as to combustibility and taste. All types are of the Nicotiana tabacum species, but, with the exception of flue-cured that originated from American seed, only a few compare with any American type. Many of the types are peculiar to Japan proper and cannot be compared with any internationally known tobacco. In general, the native types have thin papery leaves and are very light to medium light in color. Strictly dark types are limited to one Japanese type and two Taiwan types. Tobacco with heavy leaf is limited to one of the dark Taiwan types.

Japan proper

The tobacco in Japan proper includes 12 classes, which are subdivided into 25 types, and there are a few additional types that are grown commercially to a limited extent or on monopoly experimental fields. The production of American burley exceeds that of any of the latter types. Its production by farmers was begun in 1936 and by 1938 had increased to approximately 2,000,000 pounds. It is being grown for use in cigarettes made from a blend somewhat comparable with those used in most American cigarettes.

All of the native Japanese Types except Numbers 111, 113, 115 and 141 might be called light sun- or air-cured tobacco. With no exceptions noted, the Japanese types have medium to small thin leaves of light color. See classification table 4 below. Japanese sun- and air-cured types, however, are not comparable with American sun- or air-cured types. There are differences in the basic characteristics of the leaf and in the curing processes. Types 111, 113, and 115 are dark fire-cured types, and 141 is a medium light air- or sun-cured type.

Table 4.- Official classification of Japanese Empire tobacco, and description of different types a/

Class, type number, and name	Method of curing b/	Color of leaf	Approximate size of leaf	Leaves per plant	Height of plant	Plant acre
JAPANESE TOBACCO	:	:	: Inches	: Number	: Inches	: Number
I Matsukawa	:	:	:	:	:	:
11 Matsukawa	:Ren	:Tan	:16.7 x 8.4	: 21	: 66	:21,21
12 Tohzan	:Ren-Wilted	:Tan	:17.9 x 8.9	: 23	: 68	:19,63
13 Higashino	:Ren-Wilted	:Tan	:15.5 x 7.2	: 20	: 60	:18,81
15 Kanadzu	:Ren-Wilted	:Tan	:16.7 x 7.8	: 20	: 60	:20,41
16 Tsuruki	:Ren-Wilted	:Tan	:15.5 x 7.2	: 23	: 60	:20,41
II Daruma	:	:	:	:	:	:
21 Daruma	:Ren & Kan	:Tan	:22.7 x 14.1	: 19	: 61	:13,51
22 Renge	:Ren	:Tan	:19.1 x 8.4	: 19	: 60	:15,43
III 31 Kirigasaku	:Ren-Wilted	:Tan	:21.5 x 10.1	: 20	: 60	:17,24
IV 41 Hatano	:Ren	:Tan	:22.9 x 9.8	: 23	: 66	:17,57
V Bitchu	:	:	:	:	:	:
51 Bitchu	:Ren	:Tan	:19.1 x 8.9	: 19	: 54	:18,50
52 Bingo	:Ren	:Tan	:16.6 x 8.2	: 22	: 50	:16,70
VI 61 Awa	:Ren-Wilted	:Tan	:17.3 x 7.2	: 19	: 57	:19,01
VII 71 Enshu	:Ren	:Tan	:17.9 x 7.8	: 45	: 62	:14,51
VIII 81 Suifu	:Ren & Kan	:Light brown	:16.1 x 7.8	: 19	: 54	:20,16

Continued --

Table 4.- Official classification of Japanese Empire tobacco, and
description of different types a/- Continued

Class, type number, and name	Method of curing : b/	Color of leaf	Approximate size of leaf	Leaves		Height: per plant	Plants per acre
				Inches	Number		
IX Satsuma	:	:	:	:	:	62	: 19,619
91 Maruha	: Ren & Kan	: Light brown	: 11.3 x 8.7	: 22	:	62	: 19,619
92 Idzumi	: Ren & Kan	: Light brown	: 11.9 x 9.5	: 21	:	62	: 19,619
93 Tarumidzu	: Ren & Kan	: Light brown	: 11.3 x 7.2	: 23	:	61	: 19,619
94 Kokubu	: Ren & Kan	: Light brown	: 11.9 x 9.5	: 22	:	66	: 17,403
X 100 Flue-cured ...	: Flue	: Lemon to : orange	: 19.9 x 8.1	: 14	:	40	: 9,373
XI Fire-cured	:	:	:	:	:	:	:
111 Nambu	: Ren & Fire	: Greenish : dark brown	: 22.1 x 12.5	: 9	:	16	: 13,935
113 Akatsuka	: Ren & Fire	: c/	: 15.5 x 8.4	: 21	:	60	: 17,595
115 Sakushu	: Ren & Fire	: c/	: 13.1 x 6.6	: 23	:	44	: 29,873
XII Miscellaneous	:	:	:	:	:	:	:
122 Takeda	: Ren	: c/	: 20.3 x 14.3	: 20	:	54	: 16,069
131 Ibusuki	: Ren & Kan	: Light red- : dish brown	: 13.7 x 8.5	: 19	:	62	: 18,076
141 Okinawa	: Ren & Kan	: Light brown	: 16.1 x 8.4	: 27	:	72	: 15,216
CHOSEN TOBACCO	:	:	:	:	:	:	:
I 200 Flue-cured ...	: Flue	: Lemon to : orange	: 20.0 x 8.0	: c/	:	c/	: c/
II Naichi-shu	:	:	:	:	:	:	:
210 Hatano	: Ren	: Tan	: 22.0 x 10.0	: c/	:	c/	: c/
220 Suifu	: Ren & Kan	: c/	: 18.0 x 9.5	: c/	:	c/	: c/
III Zairai-shu	:	:	:	:	:	:	:
230 A Neitsu	: Ren	: Light brown	: 7.0 x 4.0	: c/	:	c/	: c/
230 B Anto	: Ren	: Light brown	: 8.5 x 4.0	: c/	:	c/	: c/
230 C Seisen	: Ren	: Light brown	: 14.0 x 7.5	: c/	:	c/	: c/
230 D Koku-san ...	: Ren	: Light brown	: 13.5 x 5.5	: c/	:	c/	: c/
230 E Kinjo	: Ren	: Light brown	: 16.5 x 5.0	: c/	:	c/	: c/
230 F Ryu Jin	: Ren	: Light brown	: 12.5 x 4.5	: c/	:	c/	: c/
230 G Suiyan	: Ren	: Light brown	: 14.2 x 5.0	: c/	:	c/	: c/
230 H Seishu	: Ren	: Light brown	: 17.0 x 8.5	: c/	:	c/	: c/
230 I Kenjo	: Ren	: Dark brown	: 15.0 x 5.0	: c/	:	c/	: c/
TAIWAN TOBACCO	:	:	:	:	:	:	:
I 300 Flue-cured ...	: Flue	: Orange	: 23.0 x 9.0	: c/	:	c/	: 8,136
II Cigar	:	:	:	:	:	:	:
310 Cigar type ...	: Air	: Greenish : brown	: 22.0 x 7.0	: c/	:	c/	: 9,439

Continued --

Table 4.- Official classification of Japanese Empire tobacco, and
description of different types a/- Continued

Class, type number, and name	: Method of curing <u>b/</u>	: Color of leaf	: Approximate size of leaf	Leaves per plant	Height of plant	Plants per acre
III Sun-cured	:	:	: Inches	Number	Inches	Number
321 Kirei.....	: Frame	: Light red-	: 24.0 x 13.0:	c/	c/	:
		: dish brown:		:	:	:
322 Shoyo.....	: Frame	: Dark red-	: 24.0 x 11.0:	c/	c/	:
		: dish brown:		:	:	7,771
323 Eitei.....	: Frame	: Tan	: 24.0 x 11.0:	c/	c/	:
324 Hoshi.....	: Frame	: Light red-	: 31.0 x 15.5:	c/	c/	:
		: dish brown:		:	:	:
IV 330 Bansan	<u>d/</u>	:		:	:	.
		:		:	:	

From reports of tobacco monopolies and information collected by Shanghai office, Office of Foreign Agricultural Relations.

a/ See accompanying map, figure 2, for location of areas where flue-cured and native types are produced.

b/ Ren-curing is a combination of sun- and air-curing of primed tobacco (for some types, leaves are wilted before curing begins). Kan-curing is air-curing of stalk-cut tobacco sometimes supplemented in damp weather with charcoal fires. For some types the lower leaves are primed and ren-cured and the stalk and remaining leaves cut and kan-cured. Frame-curing is a form of sun-curing in which the leaves are placed between light wooden frames.

c/. Information not available.

d/ Native tobacco, over which the Taiwan Monopoly has no control. It is cultivated and consumed by the aborigines.

Class I, Matsukawa: Tobacco in this group includes types 11, 12, 13, 15, and 16, and represents about 14 percent of the total production in Japan proper. All of these types are grown in northern Japan and are quite similar in general appearance. They are ren-cured and, with the exception of type 11, are wilted before curing. The soil in the districts where they are grown is sandy loam to clay loam and in the case of types 11 and 12 is derived from volcanic ash. Leaf of these types is small to medium size, tan in color, oval-shaped, thin, and has a low oil content and little stretch. They have a poor aroma, which differs from that of most tobacco. In burning quality they are poor to fair and produce a dark ash. They are used in mixtures primarily as a filler and for color where a light product is desired. Type 11 is used extensively in cigarettes with mouthpieces, cigarettes without mouthpieces, and cut tobacco. Types 12 and 13 are used only in cigarettes with mouthpieces and in cut tobacco. Types 15 and 16, of which the production is limited, have a special taste and aroma and are used only in cut tobacco and cigarettes with mouthpieces.

Class II, Daruma: Tobacco in this group includes only two types, 21 and 22, which together represent about 14 percent of production. They are grown in northern Japan, and, aside from the fact that they have larger leaves, are quite similar in general appearance to the types under Class I. Type 21, which comprises the bulk of production in this class, is both ren- and kan-cured. The

soil in which both types are produced is clay loam to gravelly clay loam and contains no volcanic ash. Leaf of this type is largely used as a filler. Type 21 is used in all products except cigars, but type 22, for which the production is limited and quality generally inferior, is used only in cut tobacco.

Class III, Kirigasaku: This class includes only one type, No. 31, which represents about 3 percent of total production. It is quite similar to types 21 and 22, and is grown in northern Japan adjacent to the districts and on soil similar to that on which type 21 is produced. It is used for bulk material in all products except cigars.

Class IV, Hatano: Tobacco in this class is limited to type 41, grown near Tokyo and represents about 2 percent of total production. It is ren-cured and in general characteristics is similar to tobacco in Classes II and III. It is distinguished, however, by a decided taste, which apparently results from its being produced on a soil containing considerable volcanic ash.

Class V, Bitchu: This class includes types 51 and 52, which represent approximately 4 percent of total production. They are grown on the Japanese mainland north of the Inland Sea and in general appearance are similar to the types under Classes II, III, and IV. They are ren-cured and are produced on clay loams, some of which contain considerable volcanic material. They are used for both color and bulk material. Type 51 is used only in cigarettes without mouthpieces and in cut tobacco, but type 52 is used in all products except cigars.

Class VI, Awa: Tobacco in this class is limited to type 61 which represents about 7 percent of total production. It is grown on the island of Shikoku on gravelly clay soil of granite and sandstone origin. In general characteristics it is similar to tobacco under Class I. It is wilted, ren-cured, and has a relatively neutral taste. It is used for color and bulk in all products except cigars.

Class VII, Enshu: This class includes only type 71, grown on the sea-coast southwest of Tokyo, and represents about 3 percent of total production. It is grown on sandy clay soil, has a relatively neutral taste, is ren-cured, and is used in mixtures for bulk and color.

Class VIII, Suifu: Tobacco under this class is confined to type 81, which represents about 2 percent of total production. It is grown in northern Japan on gravelly clay loams adjacent to the districts in which types 11 and 21 are produced. It is ren- and kan-cured and in general characteristics resembles the types under Class I. 1/ It has a distinct taste, however, and is used only in cigarettes with mouthpieces and in cut tobacco.

Class IX, Satsuma: Tobacco in this group includes types 91, 92, 93, and 94, and represents about 4 percent of total production. These types are grown on the extreme southern tip of the island of Kiushu on loamy soils, all of which contain large quantities of volcanic ash. They are both ren- and kan-cured. 1/ The leaf of these types can be readily distinguished from tobacco under

1/ Sand leaves are primed and ren-cured and the remainder of the plant stalk-cut and kan-cured.

Classes I to VII. The leaves are small, heart-shaped, light brown in color, relatively thin and papery; however, they have more body, stretch, and oil than the tobacco under Classes I to VIII. They also have more aroma, better burning quality, and produce a whiter ash. With the exception of type 91, they are used in all products except cigars, primarily for their taste and aroma. Type 91, which has a special taste and aroma, is used only in cigarettes with mouthpieces and in cut tobacco.

Class X. Flue-cured: Japanese flue-cured tobacco is classified as one general type but there are 8 widely scattered producing districts in central and southern Japan. The tobacco from the separate districts is quite similar in general appearance but varies in taste, aroma, stretch, and oil content. Production in 1938 represented about 45 percent of the total tobacco crop of Japan. It is grown on a variety of different types of soil, but clay loams, some of which contain volcanic ash, predominate. The leaf is lemon to orange in color, with orange predominating, and is smaller than American flue-cured. It has more body, stretch, oil, and aroma than native types of Japanese tobacco but is inferior to American flue-cured. In basic qualities it is not generally considered equal to most oriental flue-cured, but, due to the care taken in cultivating, curing, and grading, it has a better appearance.

The following tabulation shows quantities of the basic chemicals in three samples of Japanese flue-cured tobacco and two samples of American flue-cured as determined by the Central Research Laboratory of the Japanese Monopoly:

	American samples (1919 crop)	Japanese samples (1921 crop)	Danville	Wilson	Osaka	Hyogo	Hiroshima
			Virginia	North Carolina	District	District	District
Water	7.37	6.08			8.00	7.17	4.75
Total nitrogen	1.96	1.99			2.96	2.50	2.55
Nicotine	2.37	0.93			1.55	2.71	3.39
Total organic acids	2.39	2.32			3.32	3.01	3.38
Crude fiber	7.65	10.25			6.61	6.01	7.18
Total sugar	17.11	20.40			14.63	19.70	14.63
Tanin	2.56	3.26			4.19	7.75	5.36
Total resin	6.43	7.24			4.68	5.50	7.18
Other gums and waxes ...	2.33	2.01			2.12	1.78	3.06
Oil extractable by either process	9.74	9.74			11.15	9.15	10.33
Total ash	10.86	12.80			8.32	8.11	10.08

The entire flue-cured production is grown from seed that originated in the United States. It has been the general practice of the monopoly to grow seed crops from American flue-cured seed and distribute the seed thus produced to farmers. This has been the most convenient method of maintaining the purity of strain and quality of the crop.

Flue-cured leaf is used almost exclusively in cigarettes with mouthpieces. Its use in other products is confined to small quantities of stems and damaged leaves.

Class XI, Fire-cured: Tobacco in this group includes types 111, 113 and 115, which are grown in small, widely separated districts on the mainland of Japan. Production of the types is limited and amounts to only about 1 percent of the country's total. Types 111 and 113 are grown on sandy loam soil and type 115 on clay soil. They are either ren-cured or fire-cured. Sand leaves of the types which are primed and ren-cured are light greenish brown in color and the remaining leaves, which are stalk-cut and fire-cured, are dark greenish brown. All of the leaves are thin, papery in texture, and have a low oil content. They have a distinctive aroma unlike most tobacco, poor burning qualities, and produce a dark ash. They are used only in cigarettes with mouthpieces and in cut tobacco.

Class XII, Miscellaneous: Tobacco in this group includes types 122, 131, and 141 which so far as is known are produced on small islands south of the Japanese mainland. Production of this class represents only 1 percent of the total. Types 122 and 131 are light types and 141 is a medium light type. They are used only in cigarettes with mouthpieces and in cut tobacco.

Chosen

Tobacco produced in Chosen includes American-type flue-cured, two light types that originated in Japan, and a number of medium-light native types of which all but one are somewhat comparable with Turkish leaf.

Class I, Flue-cured: Flue-cured production represents nearly 20 percent of the total tobacco output of Chosen. The crop is largely restricted to a single area near the center of the peninsula. So far as is known, it is all produced on loamy soils. It is lemon to orange in color, with orange predominating, and is generally considered of better quality than most oriental flue-cured. It has a fair body, somewhat larger leaf than Japanese or Chinese flue-cured but not as large as American. It has a fair amount of oil and, in comparison with other oriental flue-cured, a good aroma. Most of it is grown from seed obtained from plants originating from American flue-cured seed. Plant breeders of the Chosen Monopoly have developed strains of the American varieties that are being grown to some extent, and it is the opinion of the monopoly officials that the quality of leaf from these special strains is as good as that from plants originating from American seed.

The leaf is used almost entirely in the manufacture of cigarettes without mouthpieces. Small quantities of stems and low-quality leaf are used in cut tobacco.

Class II, Naichi-shu: Tobacco in this group includes two types, 210 and 220. They are grown in southern Chosen and represent about 5 percent of total production. Production of type 210, which is grown from seed of the Japanese type 41, accounts for most of the total in the class. It is quite similar to the Japanese product and is used in cigarettes with mouthpieces and in cut tobacco.

Class III, Kairai-shu: This class of Chosen tobacco includes types 230A to 230I which are grown in numerous sections of Chosen. Types in this class, the combined production of which represents about 75 percent of the total Chosen crop, are quite different from those grown in any other section

of the Japanese Empire. Types 230A to 230H are similar in color and appearance to Turkish tobacco. They have a small, medium-light-brown leaf with medium body, fair amount of oil, and medium to good texture. Turkish tobacco was grown in Chosen for a period up to 1927, and it is probable that these types are a cross between native and Turkish types.

Type 230I is darker in color than the other types in the class and has a decidedly coarse woody texture, large stems, and is in general inferior in quality to the other types in the group.

All of the types under Class III are used extensively in both cigarettes without mouthpieces and in cut tobacco. Cigarettes made from a blend of the types in this class and Chosen flue-cured are, as regards aroma and taste, similar to American cigarettes.

Taiwan

Taiwan tobacco is classified under four classes including flue-cured, air-cured cigar types, Chinese sun-cured types, and native types.

Class I, Flue-cured: Taiwan flue-cured tobacco has larger leaves than other oriental flue-cured types. It is orange in color, has a poor texture and aroma, and in general has less quality than other oriental flue-cured. It is grown in various districts of Taiwan and represents over 50 percent of the island's total production. It is used almost entirely in cigarettes without mouthpieces.

Class II, Cigar: Class II includes only one type of tobacco and its production is limited. It is grown on the southern end of the island. It is air-cured, greenish brown in color, has a decided cigar aroma and good texture and stretch. It is essentially a binder type and resembles United States type 54, which is grown in southern Wisconsin. It is used exclusively in the production of cigars.

Class III, Sun-cured: Tobacco in this group includes types 321, 322, 323 and 324. They represent over 40 percent of Taiwan's total production. Types in this group are believed to be of Chinese origin and have large pale-brown to reddish-brown leaves. They are quite similar to tobacco grown in Chekiang Province, China. Types 321, 322, and 324 are dark types somewhat comparable with the American Green River type. Type 323 is a light type and shows some similarity to American burley.

Class IV, Bansan: Tobacco in this class is limited to type No. 330. It is grown by aborigines in the mountainous districts of Taiwan. Its production and use are not under the control of the Taiwan Monopoly, and very little is known of its quality and characteristics.

Cost of Production

The cost of producing tobacco varies materially in different parts of the Japanese Empire. In general, costs are highest in Taiwan where land values and wages are relatively high as a result of the extensive cultivation of sugarcane, pineapples, and other crops that yield a high per-acre value. In Japan proper,

costs are relatively high as a result of high land values and moderately high wages. They are lowest in Chosen where land is more plentiful and labor cheaper than in other parts of the Empire.

Production costs also vary materially between different types of tobacco, largely as a result of differences in labor requirements. In general, costs are higher for native types than for flue-cured, as the former requires more labor in curing and in preparing the leaf for market.

The cost of producing and marketing an acre of a particular type of Japanese Empire tobacco for any previous year can be approximated by multiplying the average yield for the year by the average price obtained and deducting from this amount a moderate sum representing profit to the farmer. The obtaining of relatively accurate results by this method is made possible by the practices followed by monopolies. Prior to each crop year the monopolies make careful calculations regarding the price level and probable incomes that might be obtained during the coming year from crops other than tobacco and also estimate the probable cost of producing tobacco. These calculations are used in arriving at prices by grades which are announced in advance of planting. If rises in price levels prior to the time of marketing are sufficient to increase production costs to the point where returns to farmers from prices previously announced will not give them a reasonable profit from their tobacco crop, the prices are increased. Apparently it is not the policy of monopolies to adjust prices downward with lower price levels as records show that this has never occurred.

The information monopolies use in estimating production costs and arriving at prices offered is not available to outside agencies. Preliminary results of studies recently conducted by the Economics Department of the Imperial Agricultural College, Tokyo, enable the following estimates of average production costs per acre during the 5-year period 1932 to 1936 for one of the leading native Japanese types and for flue-cured tobacco in Japan proper.

Estimated number of man work-days to produce and market 1 acre of tobacco	Days	Labor costs at \$0.08 per day	Land rent	Other costs a/	Total costs
Daruma	558	44.64	37.16	46.79	128.59
(Type 21)					
Flue-cured.....	316	25.28	37.17	33.58	96.02
(Type 100)					

a/ Include fertilizer, both chemical and manure, plant bed material, depreciation on tools and buildings, fuel for redrying in case of flue-cured, and other miscellaneous costs.

The above tabulation shows that the average cost of producing 1 acre of tobacco in Japan approximates the average cost in the United States during the same period. The production cost per pound in Japan, however, as a result of higher yields per acre, is substantially lower than in the United States. The

following tabulation shows that during the past 5 years Japanese flue-cured tobacco selling at 9.1 cents per pound has been a very profitable undertaking, whereas in the United States such a price would only partially cover cost of production.

	Average yield per acre 1932 to 1936	Average price per pound 1932 to 1936	Value per acre	Production cost	Net income
	Pounds	Cents	Dollars	Dollars	Dollars
Daruma	1,895	7.1	134.55	128.59	5.96
(Type 21)					
Flue-cured.....	1,440	9.1	131.04	96.02	35.02
(Type 100)					

A significant feature of tobacco production in Japan is the large amount of human labor required. This is necessitated by the absence of machinery and animal or mechanical power. For flue-cured tobacco about 316 man workdays are required to produce 1 acre of tobacco as compared with 40 to 45 days in the United States. The excessive number of workdays required to produce the Japanese Type 21, and which are also required for most other native types, is due to extra labor in the curing process (ren-curing), and the time spent in spreading each individual leaf when the tobacco is prepared for market..

GRADING AND MARKETING

Prior to the establishment of monopolies in the Japanese Empire, there was little uniformity in the grading and marketing of tobacco. The individual farmer often converted his crop into a finished product, mostly cut tobacco for pipe smoking, for sale directly to consumers or to small retail shops in nearby villages. Such sales of leaf as were made, were usually to small dealers who processed it themselves or sold it to manufacturers. In Chosen, where the monopoly did not come into existence until 1921, and to some extent in Japan proper and Taiwan, relatively large tobacco product factories were established before monopoly control. These institutions, however, that purchased through local dealers only took a relatively small portion of total domestic production.

When tobacco monopolies were first established their activities extended only to the purchase of leaf for resale to private manufacturers. The monopoly represented the only concern to which the farmer might sell his tobacco but it had no control over farm production or manufacture and sale of tobacco products. The early monopoly organizations took somewhat more care in grading tobacco than had been the practice before they were established; however, it was not until monopoly control was extended to both production and manufacture that careful grading was undertaken.

Grading and Preparing Tobacco for Market

Tobacco farmers in the Japanese Empire have been carefully trained by monopoly instructors to grade their tobacco in accordance with standards prescribed by the monopolies. The number of main grades for different types of tobacco varies from 10 to 20. The primary factors used in establishing grades

are in general the same as those in the United States. Position of leaf on the plant, its color and quality factors such as texture, cleanliness, and injury are all taken into account.

Great care is observed by farmers in sorting their tobacco. Each leaf is examined separately. Leaves of uniform grade and quality are tied in hands containing a prescribed number of leaves. Flue-cured leaves, most of the native Chosen types, a few Japanese types and the Taiwan cigar type are tied in hands similar in appearance to those found on American markets. A somewhat different practice is followed in the preparation of almost all of the Japanese and Taiwan types and so e Chosen types. For these types each individual leaf is spread out perfectly flat before the leaves are tied in hands (see fig. 12, p.24).

After the hands have been prepared they are packed in bundles containing a prescribed number of hands of uniform quality. The bundles of flue-cured leaf weigh . about 70 pounds and those of most domestic types about 60 pounds. They are square, with a prescribed number of hands on each side. Only the butt ends of the hands are exposed on the sides. They are tied with cord and before being taken to market are usually wrapped in straw matting.

Marketing

In recent years Government monopolies have been the only market for tobacco grown in the Japanese Empire. Marketing practices are quite uniform in all parts of the Empire and prices paid to growers are established solely by monopolies. Minimum prices by grades to be paid by a monopoly are established for each type in December preceding the year in which the tobacco is to be marketed. In recent years the range in price by grades has varied from a few cents per pound to over 30 cents.

The originally fixed prices are sometimes increased before harvest begins or during the marketing season. This is seldom done, however, and occurs only when higher prices are necessary in order to insure the grower an income from his tobacco comparable with, or above that which he might have received if other crops had been grown on his tobacco fields. Increases in prices are usually necessitated only for years when there has been a general rise in commodity price levels following the date when prices were first announced.

Tobacco markets are maintained by the monopolies at numerous points in the tobacco districts. There are approximately 110 markets or buying stations in Japan proper, 75 in Chosen, and 10 in Taiwan. They are managed by a staff of men with long experience in grading and handling tobacco and operate very smoothly.

In case a farmer's tobacco is not acceptable, monopoly buyers refuse to purchase it, and the grower is required to sort and repack it in accordance with instructions from the monopoly. This seldom happens, however, as instructors of the monopoly located in producing districts are usually able to prevent tobacco from being brought to market that is not properly graded and packed.

Table 5.- Farm price per pound of flue-cured and native tobacco, compared with United States farm prices of flue-cured, 1921 to 1938

Year	Japan Proper		Chosen		Taiwan		United States	
	Flue-cured	Native	Flue-cured	Native	Flue-cured	Native	Flue-cured	Flue-cured
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1921.....	: 19.6	17.3	: 11.3	7.5	: 19.4	11.5	: 21.9	
1922.....	: 16.9	16.0	: 11.6	8.0	: 12.5	11.6	: 27.2	
1923.....	: 18.4	15.6	: 12.3	8.8	: 13.7	11.0	: 20.8	
1924.....	: 12.7	11.8	: 10.5	6.1	: 11.2	7.6	: 21.6	
1925.....	: 18.6	14.7	: 11.6	6.5	: 13.0	9.7	: 20.0	
1926.....	: 19.7	17.7	: 12.9	7.8	: 17.1	12.8	: 24.9	
1927.....	: 16.1	16.1	: 12.7	7.7	: 18.8	12.6	: 20.5	
1928.....	: 16.6	16.1	: 11.7	6.4	: 17.1	12.7	: 17.3	
1929.....	: 17.2	17.0	: 9.6	5.7	: 17.0	13.2	: 18.0	
1930.....	: 16.9	15.4	: 13.0	5.8	: 17.9	13.3	: 12.0	
1931.....	: 11.9	10.8	: 9.9	4.4	: 13.6	10.1	: 8.4	
1932.....	: 6.3	5.2	: 5.4	2.4	: 9.0	5.0	: 11.6	
1933.....	: 9.3	7.4	: 3.5	3.1	: 13.4	7.1	: 15.3	
1934.....	: 9.7	7.0	: 7.7	3.5	: 11.4	6.3	: 27.3	
1935.....	: 10.0	7.2	: 7.4	3.8	: 11.6	7.0	: 20.0	
1936.....	: 9.8	7.4	: 7.6	3.2	: 12.2	7.0	: 22.2	
1937.....	: 11.5	8.1	: 9.4	4.6	: 13.8	7.5	: 23.0	
1938.....	: a/12.3	8.5	: b/	b/	: b/	b/	: a/22.2	
	:	:	:	:	:	:	:	

Japanese, Chosen, and Taiwan prices compiled by Shanghai office, Office of Foreign Agricultural Relations, from reports of monopolies in respective areas. Converted from Japanese yen at rate prevailing during marketing season October to March. United States prices from Agricultural Statistics, United States Department of Agriculture.

a/ Preliminary.

b/ Information not available.

The physical handling of tobacco on the market is unique and much of the noise, back bending, and other exertion that is observed on markets in the United States is avoided. The market or buying station consists of one or more (depending on the size of the market) large open sheds where farmers unload their tobacco, one or more small buying rooms, and a large warehouse. The open sheds cover a network of small narrow-gaged tracks all of which feed into a single track leading to the buying room and from there to the warehouse.

When a farmer arrives at a buying station he unloads his tobacco on small push cars of uniform weight, one bundle for each car. He then waits his turn to push his cars of tobacco along the track and into the buying room. When inside the buying room, the tobacco is graded and priced by the monopoly's buyer. It is then weighed on scales that are set to discount the weight of the car (fig. 14, p. 24). If the tobacco is accepted, the cars with the tobacco still on them are pushed off the scales and coast down the track to the warehouse where they are unloaded into ricks of tobacco of the same type and grade. If the tobacco is not accepted, the car instead of being sent into the warehouse

is switched outside, and the farmer unloads his tobacco to take home for resorting and grading.

The ticket system on markets and method of payment is much the same as in the United States. Tickets are made out by the buyer and weigher who work at the same table. The grower is given a copy which he presents to the cashier at the buying station to receive payment.

From the warehouse at the market, flue-cured tobacco is moved to the nearest redrying plant, where it is redried, packed in hogsheads of about 500 pounds, and moved to factories or large storage centers. In important districts, redrying plants, and in some cases factories, are located adjacent to the market.

Native-type leaf is not redried. After it is purchased, the bundles are repacked, wrapped with matting, and forwarded to warehouse or factory.

It is a general practice to age all flue-cured tobacco and most native types for some months before they are used in making tobacco products. Practically no weight is lost in the ageing of flue-cured but varying amounts of losses up to 8 percent occur in the ageing of domestic types.

EXPORTS AND IMPORTS

The Japanese Empire has never been a large importer or exporter of leaf tobacco and tobacco products. Imports have been confined largely to types of leaf not produced in the Empire, but which are needed in the manufacture of special products. Exports in past years have been limited to relatively small quantities of special types of native tobacco and in recent years have included some flue-cured.

For the past few decades leaf imports have in general been materially in excess of exports. Since 1897, when leaf imports were first reported, there have been only 9 years in which exports exceeded imports. Seven of these years occurred before 1920 and three were the War years 1916 to 1918.

Since 1936 there has been a decided tendency to encourage exports and curtail imports. Exports for the fiscal years 1936-37 and 1937-38 exceeded imports for the first time since 1922-23.

In 1938 the prohibition of imports of tobacco and tobacco products was included among the economy measures instigated as a result of financial stringencies arising from the military conflict with China. At the same time the need for foreign exchange for the purchase of war materials caused the government to adopt a strong policy of increasing exports of all domestic products including tobacco.

Leaf

The largest import of leaf tobacco recorded for any year was for the calendar year 1898 when some 41,000,000 pounds were imported. This, however, was an exceptional year as in general imports have not exceeded 20,000,000 pounds.

Table 6.—Exports of leaf tobacco excluding stems and scrap, by destinations, from Japan proper, Chosen, Taiwan, total for the Empire, total imports and excess of imports over exports, 1921-22 to 1936-37

Area and year beginning April 1	Exports abroad				Exports				Excess			
	China including: Manchuria:	Egypt a/	Others	Total	to other areas b/	Empire	Total exports	Imports over exports	Imports 1,000 lbs.	Total imports	Total exports	Imports 1,000 lbs.
JAPAN PROPER	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.
1921-22.....	430	0	50	480	1,594	2,074	3,726	-	1,652	-	-	-
1922-23.....	257	3,251	0	3,508	1,879	5,387	3,172	-	2,215	-	-	-
1923-24.....	472	3,380	19	3,671	2,655	6,526	14,199	-	7,673	-	-	-
1924-25.....	553	4,726	17	5,296	4,104	9,400	11,745	-	2,345	-	-	-
1925-26.....	664	3,521	93	4,278	3,431	7,709	8,630	-	921	-	-	-
1926-27.....	9,782	11	0	9,793	12,090	21,883	12,015	-	9,868	-	-	-
1927-28.....	393	0	0	393	2,100	2,493	13,313	-	10,820	-	-	-
1928-29.....	360	0	0	360	6,382	6,742	13,661	-	6,919	-	-	-
1929-30.....	181	248	0	429	2,679	3,108	13,155	-	10,047	-	-	-
1930-31.....	180	3,127	0	3,207	892	4,109	14,510	-	10,407	-	-	-
1931-32.....	235	2,575	35	2,845	306	3,151	10,349	-	7,198	-	-	-
1932-33.....	1,386	1,427	17	2,830	298	3,128	12,035	-	8,907	-	-	-
1933-34.....	272	1,993	165	2,435	166	2,601	13,282	-	10,681	-	-	-
1934-35.....	1,100	3,039	c/ 568	4,707	2,605	8,312	14,526	-	6,214	-	-	-
1935-36.....	3,234	2,000	c/ 2,140	7,374	5,899	13,273	11,982	-	1,291	-	-	-
1936-37.....	7,488	4,064	c/ 3,523	15,075	8,029	23,104	8,792	-	14,312	-	-	-
1937-38.....	1,752	4,023	c/ 1,587	7,362	520	7,882	3,395	-	4,577	-	-	-
<u>CHIUSSEN</u>												
1921-22.....	4,279	0	0	4,279	0	4,279	3,012	-	1,267	-	-	-
1922-23.....	2,814	0	0	2,814	0	2,814	3,446	-	632	-	-	-
1923-24.....	1,576	0	0	1,576	0	1,576	4,063	-	2,487	-	-	-
1924-25.....	0	0	0	0	0	0	6,330	-	6,330	-	-	-
1925-26.....	855	513	0	1,850	0	1,850	4,614	-	2,764	-	-	-
1926-27.....	249	0	394	643	1,237	1,880	17,911	-	16,031	-	-	-
1927-28.....	0	0	0	0	662	662	15,267	-	14,605	-	-	-
1928-29.....	2	0	0	2	1,046	1,048	12,266	-	11,218	-	-	-
1929-30.....	542	0	0	542	1,541	2,083	7,439	-	5,356	-	-	-
1930-31.....	269	1,564	0	1,833	827	2,660	8,114	-	5,454	-	-	-
1931-32.....	550	0	0	550	1,273	1,823	3,761	-	1,938	-	-	-
1932-33.....	670	922	0	1,602	1,771	3,373	2,696	-	1,677	-	-	-
1933-34.....	288	1,413	0	1,701	1,010	2,711	4,151	-	1,440	-	-	-
1934-35.....	3	809	6	818	603	1,421	18,621	-	17,200	-	-	-
1935-36.....	0	928	0	928	0	928	13,236	-	12,308	-	-	-
1936-37.....	2	1,433	0	1,435	0	1,435	15,636	-	14,201	-	-	-
							19,080	-	19,080	-	-	-

TAIWAN	2,238	2,170	1,170	1,170	2,238
-921-22.....	0	0	0	0	0
-922-23.....	0	0	0	0	0
-923-24.....	0	0	0	0	0
-924-25.....	0	0	0	0	0
-925-26.....	0	0	0	0	0
-926-27.....	0	0	0	0	0
-927-28.....	0	0	0	0	0
-928-29.....	0	0	0	0	0
-929-30.....	0	0	0	0	0
-930-31.....	0	0	0	0	0
-931-32.....	0	0	0	0	0
-932-33.....	0	0	0	0	0
-933-34.....	0	0	0	0	0
-934-35.....	0	0	0	0	0
-935-36.....	0	0	0	0	0
-936-37.....	0	0	0	0	0
-937-38.....	0	0	0	0	0
Total Empire	4,709	3,251	3,071	3,071	4,709
-921-22.....	0	0	0	0	0
-922-23.....	0	0	0	0	0
-923-24.....	0	0	0	0	0
-924-25.....	0	0	0	0	0
-925-26.....	0	0	0	0	0
-926-27.....	0	0	0	0	0
-927-28.....	0	0	0	0	0
-928-29.....	0	0	0	0	0
-929-30.....	0	0	0	0	0
-930-31.....	0	0	0	0	0
-931-32.....	0	0	0	0	0
-932-33.....	0	0	0	0	0
-933-34.....	0	0	0	0	0
-934-35.....	0	0	0	0	0
-935-36.....	0	0	0	0	0
-936-37.....	0	0	0	0	0

22-29
Compiled by Shanghai Office of Foreign Agricultural Relations, from reports of tobacco monopolies in their respective areas. a/ Exports from Chosen include some quantities exported to Switzerland as they were reported together. b/ Exports for the separate areas are those reported by the monopoly in the area concerned and as a result of inconsistencies in reporting or lapse of time between shipments and receipts do not in all cases check with imports shown in table c. c/ Largely flue-cured to Europe, primarily to Germany.

Table 7.—Imports of leaf tobacco including stems and scrap, by origin into Japan proper, Chosen, Taiwan,
and total for the Empire, 1921-22 to 1935-36

Area and year beginning April 1	Imports from abroad						Imports from the Empire						Total						
	Japan proper	United States	China	including Manchuria	Turkey	British India	Philippine Islands	Others	Total	From Empire sources a/	Empire sources a/	Total	From Empire sources a/	Empire sources a/	Total	From Empire sources a/	Empire sources a/		
1921-22	718	1,955	8	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	219	124	3,112	614	3,726	3,726	3,726	3,726	3,726		
1922-23	2,497	398	0	0	0	4	0	0	273	0	3,172	0	3,172	3,172	3,172	3,172	3,172		
1923-24	10,733	2,052	18	865	531	0	0	0	174	0	14,199	0	14,199	14,199	14,199	14,199	14,199		
1924-25	6,950	1,574	32	1,126	1,549	0	0	0	11,405	0	3,630	0	3,630	11,745	11,745	11,745	11,745		
1925-26	5,104	1,681	30	1,223	592	0	0	0	2	10,778	0	1,237	0	1,237	12,015	12,015	12,015	12,015	
1926-27	7,867	1,125	1	941	842	0	0	0	163	0	12,651	0	12,651	662	662	662	662		
1927-28	8,289	1,742	2	710	1,745	0	0	0	1,047	0	12,615	0	12,615	1,046	1,046	1,046	1,046		
1928-29	8,232	1,762	10	1,047	1,560	0	0	0	3,367	0	11,614	0	11,614	1,541	1,541	1,541	1,541		
1929-30	6,523	2,067	8	1,367	1,335	0	0	0	312	0	13,689	0	13,689	827	827	827	827		
1930-31	7,593	2,353	31	2,128	1,582	0	0	0	1,911	0	9,076	0	9,076	1,273	1,273	1,273	1,273		
1931-32	7,573	2,378	36	2,336	2,336	0	0	0	2,136	0	10,264	0	10,264	1,771	1,771	1,771	1,771		
1932-33	3,414	2,512	23	2,136	2,175	0	0	0	2,175	0	4	0	4	12,455	12,455	12,455	12,455		
1933-34	5,266	1,820	14	3,171	2,164	0	0	0	2,164	0	20	0	20	12,455	12,455	12,455	12,455		
1934-35	5,293	3,689	7	2,019	2,019	0	0	0	1,911	0	6	0	6	13,923	13,923	13,923	13,923		
1935-36	5,157	2,585	9	1,802	2,407	0	0	0	1,802	0	22	0	22	11,982	11,982	11,982	11,982		
1936-37	2,909	2,718	11	1,716	2,322	0	0	0	2,718	0	16	0	16	5,792	5,792	5,792	5,792		
1937-38	1,026	0	0	0	0	0	0	0	0	0	0	0	0	3,305	3,305	3,305	3,305		
<u>CHOSEN</u>									0	0	0	0	0	0	0	0	0	0	
1921-22	736	246	0	0	0	0	0	0	668	0	0	0	0	0	1,650	1,650	1,650	1,650	
1922-23	1,145	0	3	0	0	0	0	0	233	0	124	0	124	1,505	1,505	1,505	1,505		
1923-24	768	40	0	0	0	0	0	0	248	0	0	0	0	0	1,408	1,408	1,408	1,408	
1924-25	864	0	0	0	0	0	0	0	403	0	0	0	0	0	1,518	1,518	1,518	1,518	
1925-26	1,053	0	0	0	0	0	0	0	130	0	0	0	0	0	1,183	1,183	1,183	1,183	
1926-27	905	2,814	0	0	0	0	0	0	97	49	0	0	0	0	3,865	3,865	3,865	3,865	
1927-28	1,005	5,797	0	1,949	0	0	0	0	2,914	0	2,914	0	2,914	0	11,665	11,665	11,665	11,665	
1928-29	1,617	0	0	0	0	0	0	0	2,249	0	860	0	860	0	5,056	5,056	5,056	5,056	
1929-30	1,252	230	0	1,629	0	0	0	0	1,629	0	966	0	966	0	4,097	4,097	4,097	4,097	
1930-31	3,609	0	1	1,594	0	0	0	0	1,594	0	2,108	0	2,108	0	7,312	7,312	7,312	7,312	
1931-32	832	0	0	1,199	0	0	0	0	1,199	0	1,424	0	1,424	0	3,455	3,455	3,455	3,455	
1932-33	0	0	2	1,319	0	0	0	0	1,319	0	0	0	0	0	2,399	2,399	2,399	2,399	
1933-34	1,146	0	0	2,599	0	0	0	0	2,599	0	2,407	0	2,407	0	3,985	3,985	3,985	3,985	
1934-35	628	3,199	0	3,732	0	0	0	0	3,732	0	1,595	0	1,595	0	15,016	15,016	15,016	15,016	
1935-36	808	1,119	2	4,375	0	0	0	0	4,375	0	0	0	0	0	3,399	3,399	3,399	3,399	
1936-37	2,217	1,949	5	2,324	0	0	0	0	2,324	0	0	0	0	0	6,495	6,495	6,495	6,495	
<u>TAIWAN</u>									—	—	—	—	—	—	—	4,000	4,000	4,000	4,000

TAIWAN <i>q/</i>	TURKISH TERRITORIES <i>b/</i>	CHINA <i>a/</i>	PHILIPPINES <i>c/</i>	INDIA <i>d/</i>	EGYPT <i>e/</i>	AFRICA <i>f/</i>	MIDDLE EAST <i>g/</i>	EUROPE <i>h/</i>	MIDDLE EAST <i>i/</i>	AFRICA <i>j/</i>	MIDDLE EAST <i>k/</i>	ASIA <i>l/</i>	AMERICA <i>m/</i>
1921-22.....	0	2,224	0	4,425	88	887	138	0	0	0	0	0	2,238
1922-23.....	0	1,169	1,608	1,567	0	237	398	0	0	0	0	0	1,170
1923-24.....	38	1,742	2,265	3,700	1,213	783	1	0	0	0	0	0	1,647
1924-25.....	272	2,256	2,256	3,316	1,529	1,800	177	0	0	0	0	0	2,017
1925-26.....	62	163	175	6,946	1,353	1,353	2	0	0	0	0	0	2,329
1926-27.....	1927-28.....	187	263	229	6,195	1,038	3	0	0	0	0	0	2,420
1928-29.....	1929-30.....	180	187	0	8,935	2,659	4,659	163	0	0	0	0	638
1930-31.....	1931-32.....	91	213	282	9,469	8,483	3,296	2,420	0	0	0	0	1,119
1932-33.....	1933-34.....	434	434	0	10,112	2,132	8	2,996	0	0	0	0	641
1934-35.....	1935-36 <i>q/</i>	76	76	76	7,984	2,747	2,301	3,722	0	0	0	0	516
1936-37 <i>q/</i>	1937-38.....	0	0	0	11,382	2,688	32	3,690	0	0	0	0	304
1937-38.....					1,382	2,549	36	3,335	0	0	0	0	718
					3,801	2,794	25	3,214	0	0	0	0	414
					3,848	1,820	14	3,411	0	0	0	0	182
					6,641	6,888	7	5,426	0	0	0	0	793
					6,707	6,888	11	3,397	0	0	0	0	568
					6,454	3,780	16	1,716	0	0	0	0	693
					4,634	4,935		4,646					

Compiled by Shanghai Office, Office of Foreign Agricultural Relations, from reports of tobacco monopolies in respective areas. *a/* Imports for the separate areas are those reported by the monopoly in the area concerned and as a result of inconsistencies in reporting or lapse of time between shipments and receipt do not in all cases check with exports as shown in table b. *b/* Less than 500 pounds. *c/* Imports from Turkey, India, and Philippine Islands are not reported separately, and if any, are included with others. *d/* Estimated from official imports by calendar years. *e/* Not separately reported by countries.

The largest export for any calendar year for which definite information is available was in 1917 when approximately 11,500,000 pounds were sent abroad. Incomplete information indicates that exports for both 1936 and 1937 were in excess of this amount.

The United States has been the most important source of supply for imported leaf and in recent years has furnished about 35 percent of the total. Imports from the United States are almost entirely flue-cured; however, for certain years they have included small quantities of Kentucky-Tennessee fire-cured, dark Virginia, burley, and certain cigar types. Quality of flue-cured leaf imported from the United States into Japan proper has been average to better than average, and is used in best grade cigarettes. Imports into Chosen and Taiwan have been made up of average- to below-average-quality leaf. Certain quantities of average-quality leaf are needed in these areas for use in best-grade cigarettes but at times substantial quantities of low grades have been imported to supplement domestic leaf in lower-quality cigarettes.

Other sources of leaf imports into the Japanese Empire in order of their importance include China, India, the Philippine Islands, and Turkey. Imports from China, particularly those of recent years, are almost entirely flue-cured. Imports from the Philippines are confined to cigar types and those from India include a variety of types but are primarily native Indian types. Imports from Turkey are limited to small quantities of cigarette types.

Exports of leaf until recent years have been almost entirely to China and Egypt. Exports to China have included a variety of types but in recent years have been largely limited to flue-cured. Exports to Egypt are confined to native cigarette types under Classes I and IV from Japan proper, and similar type leaf under Class II from Chosen.

Beginning with 1933-34, Japan proper has exported small quantities of flue-cured to Europe, principally to Germany. For the fiscal year 1936-37 the quantity exported exceeded 2,500,000 pounds.

Tobacco Products

Imports and exports of tobacco products have always been relatively insignificant and have declined in recent years. Imports of cigarettes have never been much in excess of one billion pieces and exports have been much less. Trade in cigars has been negligible. Small quantities are imported but there are practically no exports. In early years cut tobacco was the principal tobacco product in foreign trade of the Empire. In recent years, exports of this product have been maintained but imports have declined.

Intershipment Within the Empire

All parts of the Japanese Empire are relatively self-sufficient in the production of leaf tobacco and tobacco products, and intershipment between different parts is relatively unimportant. For leaf tobacco the greatest movement is from Japan proper to Chosen. Annual shipments in recent years have varied in amounts from less than 200,000 pounds to 12,000,000 pounds. They have consisted primarily of flue-cured leaf with small quantities of various native types. Japan proper receives limited quantities of various types of tobacco from

Chosen. Between 1931 and 1933 the annual shipment averaged 1,300,000 pounds but has been practically nil since that period. Taiwan received practically no leaf from other Empire sources and does not supply any for other parts of the Empire.

Shipments of tobacco products within the Empire are limited and are largely confined to quantities needed for consumption by natives from one part of the Empire that are residing in another.

Table 8.- Imports and exports of tobacco products of the Japanese Empire, 1921-22 to 1936-37

Year	Imports			Exports a/		
	Cigarettes	Cigars	Cut tobacco	Cigarettes	Cut tobacco	
	: 1,000 pieces:	: 1,000 pieces:	Pounds	: 1,000 pieces:	Pounds	
1921-22.....	231,995	1,981	57,075	28,560	19,478	
1922-23 b/.....	381,481	2,406	26,651	28,000	19,000	
1923-24.....	952,251	1,545	26,369	5,120	26,422	
1924-25.....	837,099	1,032	31,471	0	25,959	
1925-26.....	954,518	1,900	44,505	0	28,523	
1926-27.....	998,866	972	31,604	11,000	28,605	
1927-28.....	1,076,190	640	23,996	20,710	27,002	
1928-29.....	910,835	845	16,987	47,060	26,837	
1929-30.....	1,009,089	909	12,184	57,065	19,165	
1930-31.....	1,024,438	938	27,525	24,290	21,678	
1931-32.....	621,015	333	8,776	25,612	16,221	
1932-33.....	449,302	232	13,188	78,490	17,112	
1933-34.....	99,754	512	11,034	130,710	21,429	
1934-35.....	133,719	1,222	19,188	162,096	27,033	
1935-36.....:c/	82,000	c/	900 :c/	10,500	222,707	26,041
1936-37.....	81,000	c/	800 :c/	11,200	263,123	30,207

Compiled by Shanghai office, Office of Foreign Agricultural Relations, from reports of monopolies in respective areas.

a/ Japan proper only, exports are not shown for Chosen and Taiwan and are apparently insignificant, if any.

b/ Records doubtful due to loss of detailed reports for Japan proper occasioned by 1923 earthquake.

c/ Estimated on basis of reported imports for Japan proper.

Practices Followed in Imports and Exports

Prior to the establishment of monopolies, trade in leaf tobacco and tobacco products was carried on by private concerns and both leaf and products were subject to import and export duties. With the establishment of monopolies, foreign trade was placed under their supervision, duties were removed, and imports were restricted to quantities permitted by monopolies.

Each monopoly has followed somewhat different practices as regards imports and exports. Until 1938, when imports were prohibited, the Japanese monopoly maintained an office in New York City through which it purchased its requirements of American leaf. Purchases were made through the office from established American firms who arranged shipment direct to Japan. Requirements of other

foreign-type leaf were obtained through Japanese importers, the monopoly placing orders for specified quantities needed. When leaf from any foreign source arrives, it is delivered directly to the monopoly or held in bond until called for. Imports of tobacco products have been made through agents authorized by the monopoly. Exports of both leaf and Japanese tobacco products are made through authorized agents, each exporting agency being authorized by the monopoly to sell to a certain group of countries.

The Chosen monopoly, until the prohibition of imports in 1938, purchased its requirements of American leaf through Chosen agencies of American firms. The American firms sent leaf samples direct to the monopoly, and prices were arranged between the monopoly and Chosen agencies of the firms. Imports of other foreign leaf were arranged through Chosen agencies in the same manner as was the case in Japan proper. Imports of tobacco products are also made by Chosen agencies. Exports of leaf tobacco and tobacco products are arranged in a manner similar to the practice followed by the Japanese monopoly. In some cases the agency serving the Japanese monopoly also exports for the Chosen monopoly.

Imports and exports for Taiwan are arranged in much the same manner as in Chosen.

MANUFACTURE AND CONSUMPTION

Tobacco consumption in the Japanese Empire in the fiscal year 1936-37 totaled approximately 198,000,000 pounds (processing order) as compared with about 175,000,000 in 1930-31 and 125,000,000 pounds in 1920-21. The increase of 47 percent since 1920-21 has been brought about by increased population and higher per-capita consumption. Population has increased more than 20 percent during this period and per-capita consumption over 25 percent. The rise in per-capita consumption has been largely brought about by industrialization and growth of cities where consumption per person is much higher than in rural districts. The rapid increase in the use of cigarettes, which has been nearly 100 percent since 1920, has also acted to increase per-capita consumption.

Despite the increase during recent years, per-capita consumption is still low in comparison with most other countries. For the Empire as a whole the average annual per-capita consumption is only about 2.11 pounds. This compares with 2.8 pounds in China, 3.7 pounds in India, and 6.6 pounds in the United States. The low per-capita consumption is attributed to low income for most of the population and the general abstinence by the Japanese from the use of all types of stimulants.

Tobacco is consumed in the form of cigarettes, cigars, and cut tobacco for pipe smoking. Practically no snuff is used and consumption of plug tobacco has been limited to negligible quantities imported from America. In 1936-37 approximately 50 percent of total consumption was in the form of pipe tobacco, 41 percent was cigarettes without mouthpieces, and 9 percent cigarettes with mouthpieces. Cigar consumption accounts for less than one-half of 1 percent. The use of cigarettes and cigars is largely confined to urban districts where incomes are relatively high. Cut tobacco is used by farmers and low-income classes in urban districts.

Table 9.- Quantities of leaf tobacco including stems and scrap used in the manufacture of tobacco products in Japan proper, Chosen, Taiwan, and total for the Empire, 1921-22 to 1936-37 a/

Area and year beginning April 1	Cigarettes				Cigars	Cut tobacco	Total all products
	Without mouth- pieces	With mouth- pieces	Total				
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds			
<u>JAPAN PROPER</u>	:	:	:	:	:	:	:
1921-22.....	7,708	35,734	43,442	53	30,284	123,779	
1922-23.....	9,590	38,690	48,280	14	74,822	123,116	
1923-24.....	12,493	38,371	50,864	21	66,263	117,148	
1924-25.....	13,950	42,551	56,501	43	72,086	128,630	
1925-26.....	17,352	38,369	55,721	42	69,053	124,816	
1926-27.....	21,292	31,844	53,136	36	69,856	127,028	
1927-28.....	24,649	33,301	57,950	34	67,826	125,810	
1928-29.....	28,848	35,363	64,211	29	68,556	132,796	
1929-30.....	31,114	33,718	64,932	28	65,301	130,261	
1930-31.....	34,396	29,141	63,537	28	65,561	129,126	
1931-32.....	37,967	22,666	60,633	18	64,284	124,935	
1932-33.....	43,003	17,800	60,803	4	62,311	123,118	
1933-34.....	48,561	17,584	66,145	24	62,421	128,590	
1934-35.....	56,927	20,536	77,463	44	59,526	137,033	
1935-36.....	60,176	19,670	79,846	35	53,702	133,583	
1936-37.....	66,087	18,122	84,209	28	55,918	140,155	
<u>CHOSÉN b/</u>	:	:	:	:	:	:	:
1921-22.....	5,162	1,747	6,909	0	212	7,121	
1922-23.....	5,873	2,858	8,731	0	1,115	9,846	
1923-24.....	6,449	1,671	8,120	0	5,889	14,009	
1924-25.....	6,829	1,282	8,111	0	8,286	16,397	
1925-26.....	7,863	1,507	9,370	0	11,958	21,328	
1926-27.....	7,723	1,146	8,869	0	23,598	32,467	
1927-28.....	7,536	1,153	8,689	0	23,498	32,187	
1928-29.....	8,368	1,155	9,523	0	25,815	35,338	
1929-30.....	8,856	1,164	10,020	0	29,814	39,834	
1930-31.....	7,829	793	8,622	0	33,330	41,952	
1931-32.....	6,923	498	7,421	0	31,718	39,139	
1932-33.....	7,240	434	7,674	0	32,916	40,590	
1933-34.....	7,902	291	8,193	0	34,065	42,858	
1934-35.....	10,739	289	11,028	0	38,961	49,989	
1935-36.....	11,952	334	12,286	0	40,245	52,531	
1936-37.....	13,632	277	13,909	0	39,894	53,803	

Continued--

Table 9.- Quantities of leaf tobacco including stems and scrap used in the manufacture of tobacco products in Japan proper, Chosen, Taiwan, and total for the Empire, 1921-22 to 1936-27 a/ - Continued

Area and year beginning April 1	Cigarettes				Cigars	Cut tobacco	Total all products
	Without mouth- pieces	With mouth- pieces	Total				
TAIWAN	: 1,000 pounds	: 1,000 pounds	: 1,000 pounds	: 1,000 pounds	: 1,000 pounds	: 1,000 pounds	: 1,000 pounds
1921-22.....	128	122	250	4	3,316	3,316	3,570
1922-23.....	240	86	326	2	3,347	3,347	3,675
1923-24.....	137	40	177	2	3,165	3,165	3,344
1924-25.....	196	c/	196	4	3,072	3,072	3,272
1925-26.....	311	0	311	3	3,300	3,300	3,614
1926-27.....	380	0	380	5	3,067	3,067	3,452
1927-28.....	438	0	438	5	3,087	3,087	3,530
1928-29.....	469	0	469	6	3,108	3,108	3,583
1929-30.....	513	0	513	8	3,082	3,082	3,603
1930-31.....	591	0	591	8	2,954	2,954	3,553
1931-32.....	673	0	673	7	2,689	2,689	3,369
1932-33.....	820	0	820	8	2,687	2,687	3,515
1933-34.....	1,003	0	1,003	8	2,595	2,595	3,606
1934-35.....	1,295	0	1,295	9	2,561	2,561	3,865
1935-36 d/.....	1,400	0	1,400	10	2,590	2,590	4,000
1936-37 d/.....	1,500	0	1,500	10	2,690	2,690	4,200
TOTAL EMPIRE :	:	:	:	:	:	:	:
1921-22.....	12,998	37,603	50,601	57	83,812	83,812	134,470
1922-23.....	15,703	41,634	57,337	16	79,284	79,284	136,637
1923-24.....	19,079	40,082	59,161	23	75,317	75,317	134,501
1924-25.....	20,975	43,833	64,808	47	83,444	83,444	148,299
1925-26.....	25,526	39,876	65,402	45	84,311	84,311	149,758
1926-27.....	29,395	32,990	62,385	41	96,521	96,521	158,947
1927-28.....	32,623	34,454	67,077	39	94,411	94,411	161,527
1928-29.....	37,685	36,518	74,203	35	97,479	97,479	171,717
1929-30.....	40,483	34,982	75,465	36	98,197	98,197	173,698
1930-31.....	42,816	29,934	72,750	36	101,845	101,845	174,631
1931-32.....	45,563	23,164	68,727	25	98,691	98,691	167,443
1932-33.....	51,063	18,234	69,297	12	97,914	97,914	167,223
1933-34.....	57,466	17,875	75,341	32	99,681	99,681	175,054
1934-35.....	68,961	20,825	89,786	53	101,048	101,048	190,887
1935-36.....	73,528	20,004	93,532	45	96,537	96,537	190,114
1936-37.....	81,219	18,399	99,618	38	98,502	98,502	198,158

Compiled by Shanghai office, Office of Foreign Agricultural Relations, from reports of tobacco monopolies in respective areas.

a/ Weight of leaf, stems, and scrap on removal from storage for use in manufacture, i.e. redrying loss and shrinkage in storage deducted.

b/ From 1921-22 to 1929-30 some leaf was sold by the monopoly to private manufacturers for use in manufacturing products for sale in Chosen. These quantities were large for the first years of the period but declined to only 258,000 pounds for the year 1929-30.

c/ Less than 500 pounds.

d/ Approximate.

Table 10.—Quantities of tobacco by types used in the manufacture of different products in Japan proper and Chosen, 1931-32 to 1936-37

Product	Japan proper					Chosen a/
	1931-32:	1932-33:	1933-34:	1934-35:	1935-36:	
CIGARETTES WITHOUT MOUTHPIECES:	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1936-37:
<u>Flue-cured:</u>						
Japanese	12,769:	15,730:	19,954:	19,687:	26,314:	37,549:
Chosen	818:	1,237:	1,733:	1,873:	0:	0:
Chinese	2,158:	1,473:	2,617:	3,468:	1,759:	2,628:
American	7,857:	5,467:	5,829:	11,157:	9,004:	4,903:
Japanese native types	9,220:	15,192:	15,020:	16,113:	16,274:	16,638: b/ 3,936: b/ 4,584
Other types (foreign):						
Turkish	26:	13:	0:	18:	15:	11:
Philippine	1,554:	1,673:	2,319:	2,458:	2,180:	2,332:
Indian native types	2,262:	1,687:	1,039:	3,153: d/ 0:	1,737:	2,026:
Others e/	1,303:	531:	0:	0:	2,893:	0:
Total	37,967:	43,003:	48,561:	56,927:	60,176:	66,087:
<u>CIGARETTES WITH MOUTHPIECES -</u>						
<u>Flue-cured:</u>						
Japanese	115:	71:	172:	194:	139:	79:
American	0:	0:	106:	99:	42:	24:
Japanese native types	22,551:	17,729:	17,306:	20,243:	19,439:	18,019: f/ 0:
Total	22,666:	17,800:	17,584:	20,536:	19,670:	18,122:
<u>CIGARS -</u>						
Havana, Sumatra, etc.	13:	4:	24:	44:	35:	28:
CUT TOBACCO -						
Japanese native types	64,284:	62,311:	62,421:	59,526:	53,702:	55,918: g/ 38,961: g/ 39,394
Total all Products	124,935:	123,118:	128,590:	137,033:	133,583:	140,155:

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Compiled by Shanghai Office, Office of Foreign Agricultural Relations, from reports of monopolies.

a/ Further information not available.

b/ Chosen native types.

c/ Less than 500 pounds.

d/ Includes some Indian flue-cured.

e/ Other foreign types in the case of Japan, and largely stems in the case of Chosen.

f/ Native Japanese types and similar types produced in Chosen.

g/ Largely Chosen native types, but includes flue-cured, Japanese, Indian native types, and Philippine.

Cut Tobacco

Pipe smoking was one of the first methods of tobacco consumption in the Japanese Empire and still accounts for about half of total disappearance. During the past two and a half decades its use has not increased as rapidly as cigarettes. In recent years its consumption has tended to fluctuate with changing economic conditions. Its use tends to decrease in periods of prosperity, when a larger percentage of the people are financially able to smoke cigarettes, and to increase in periods of depressions.

Cut tobacco for pipe smoking is prepared almost exclusively from native types of tobacco. Practically no native flue-cured is used, and the use of imported leaf is limited to small quantities needed for improving the taste and aroma of the better mixtures. The mixture of materials other than tobacco in the preparation of cut tobacco is very limited, and is confined to certain perfume oils used in some brands.

In Japan proper most of the pipe tobacco is very fine-cut, much finer than is tobacco for cigarettes in the United States. Only very small quantities of coarse-cut and no plug cut are produced.

In Chosen and Taiwan most of the pipe tobacco is coarse-cut. Fine-cut is largely limited to quantities for sale to Japanese residents and for shipment to Japan proper.

In Japan proper cut tobacco is smoked in dry pipes. The pipes have a bamboo stem about 6 to 10 inches long fitted with brass mouthpiece and brass bowl. The bowl is very small, only about one-eighth of the size of an ordinary American pipe. This may account in part for the low per-capita consumption of tobacco. In Chosen and Taiwan both dry pipes and water pipes are used but dry pipes of a large type similar to those used in China predominate.

Cigarettes

Cigarettes have been in use in the Japanese Empire since the last quarter of the nineteenth century. Their consumption has expanded rapidly, especially since 1915. For that year consumption totaled about 9 billion pieces. The increase from then until 1938 has been about 400 percent or to about 45 billion pieces.

Cigarettes both with and without mouthpieces have been in general use. Until recent years, the use of cigarettes with mouthpieces has represented the bulk of consumption in Japan proper. Cigarettes with mouthpieces have been extensively used in Chosen but have represented only a relatively small proportion of the total consumption. In Taiwan the consumption was originally about equally divided between the two types but in recent years cigarettes with mouthpieces have almost disappeared.

As late as 1920 sales of cigarettes with mouthpieces represented 78 percent of the total sold in the Empire. Since that year the Empire's consumption of cigarettes without mouthpieces has expanded very rapidly. In 1937 over 70 percent of total sales were cigarettes without mouthpieces.

The rapid shift in recent years from cigarettes with mouthpieces to cigarettes without mouthpieces has been largely due to the development of a taste for foreign-type tobacco, namely flue-cured, which is used in large quantities only in cigarettes without mouthpieces. The younger generation use the latter almost exclusively, and it is probable that within the next several years the use of cigarettes with mouthpieces will cease.

There are a number of brands of cigarettes, both with and without mouthpieces. They vary as to size, type of pack, and tobacco mixture used in their production. Cigarettes without mouthpieces vary in size from those requiring less than 2 pounds of tobacco per thousand to certain brands similar to American cigarettes requiring about 2.75 pounds per thousand. In general the length of cigarettes without mouthpieces is approximately equal to that of American cigarettes, but for some brands the diameter is much smaller. Packages vary from 10 to 100 cigarettes. Blends vary materially between different brands, but as a whole cigarettes without mouthpieces are about two-thirds flue-cured, either Japanese, Chosen, Chinese, or American. In 1931-32 American accounted for about 33 percent of total flue-cured used, but by 1936-37 the portion had declined to about 11 percent. There has been further decline since that year and unless the prohibition of imports is removed its use will soon be discontinued.

Approximately 27 percent of total leaf used in cigarettes without mouthpieces is native types and 10 percent foreign types, other than flue-cured, including Philippine, Indian, and Turkish leaf. The admixture of materials other than tobacco is quite general for some brands and includes rum, glycerine, sugar, and various other products. For the manufacture of cigarettes without mouthpieces the leaf is generally cut somewhat finer than is the case for American cigarettes.

Cigarettes with mouthpieces are generally uniform in size but vary materially in blends. The length and diameter of the cigarette are about the same as of the American product, but about one-third or more of the length is made up of a cardboard mouthpiece. It requires only about 1.65 pounds of tobacco for the production of 1,000 cigarettes of this type as compared with approximately 2.85 pounds used in the manufacture of the standard American cigarette. Blends are made up almost entirely from domestic-type leaf and practically no material other than tobacco is used. The leaf is cut finer than for cigarettes without mouthpieces. Cutting is similar to that for fine-cut tobacco.

Cigars

Consumption of cigars in the Japanese Empire has always been very limited. The supply is largely confined to imported products and those made from imported leaf. They are relatively expensive and their sale is largely limited to people with high incomes. Low cigar consumption may also be due to the apparent inability of the Japanese to take large quantities of stimulants.

Domestic production of cigars is largely confined to hand-made products. There are only two cigar-making machines in Japan proper and none in Chosen and Taiwan.

Table 11.—Supply and disappearance of leaf tobacco including stems and scrap in Japan proper, Chosen, Taiwan, and total for the Empire, 1921-22 to 1935-37

Area	Supply			Purchases			Other			Used in manufacture			Disappearance			
	Carry-over beginning April 1	over stocks a/	Empire b/	Foreign c/	Domestic d/	Pounds	Pounds	Pounds	Pounds	Total	manufac-ture a/	Leaf sales e/	Leaf sales f/	Other g/	Total pounds h/	
JAPAN PROPER	1,000	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	
1921-22	156,596	: 614	: 3,112	: 134,899	: 415	: 295,636	: 132,468	: 2,074	: 547	: 135,089						
1922-23	160,547	: 0	: 3,172	: 153,365	: 289	: 317,373	: 131,930	: 5,387	: 463	: 137,780						
1923-24	179,573	: 0	: 14,199	: 136,115	: 375	: 330,282	: 124,975	: 6,526	: 7,846	: 139,347						
1924-25	190,935	: 340	: 11,405	: 140,567	: 454	: 343,701	: 134,791	: 9,429	: 344	: 144,564						
1925-26	199,137	: 0	: 3,620	: 143,426	: 651	: 351,844	: 132,906	: 7,757	: 455	: 141,118						
1926-27	210,726	: 1,237	: 10,778	: 138,596	: 738	: 362,075	: 131,530	: 21,383	: 956	: 154,369						
1927-28	207,706	: 662	: 12,651	: 150,371	: 884	: 372,274	: 133,939	: 2,493	: 1,221	: 137,653						
1928-29	234,621	: 1,046	: 12,615	: 140,485	: 670	: 389,437	: 141,381	: 6,742	: 942	: 149,065						
1929-30	240,372	: 1,541	: 11,614	: 136,212	: 631	: 390,370	: 138,539	: 3,108	: 1,622	: 143,269						
1930-31	247,101	: 827	: 13,689	: 150,186	: 611	: 412,414	: 137,368	: 4,109	: 1,378	: 142,855						
1931-32	269,559	: 1,273	: 9,076	: 150,711	: 1,975	: 432,594	: 131,907	: 3,122	: 2,868	: 137,397						
1932-33	294,697	: 1,771	: 10,264	: 133,610	: 1,791	: 441,133	: 129,658	: 3,128	: 2,194	: 134,980						
1933-34	306,153	: 827	: 12,455	: 146,695	: 820	: 466,950	: 135,614	: 2,601	: 3,630	: 141,845						
1934-35	325,105	: 603	: 13,923	: 145,484	: 669	: 485,784	: 144,780	: 8,313	: 3,951	: 157,044						
1935-36	328,740	: 0	: 11,982	: 142,262	: 654	: 483,638	: 141,204	: 13,273	: 4,417	: 158,894						
1936-37	324,744	: 0	: 8,792	: 133,356	: 624	: 467,516	: 146,917	: 23,175	: 4,081	: 174,173						
1937-38	293,343	: 0	: 3,305	: 140,502	: 600	: 437,750	: 150,000	: 7,882	: 4,000	: 161,882						
<hr/>																
CHOSÉN																
1921-22	20,598	: 1,362	: 1,650	: 19,899	: hy/	: 200	: 42,709	: 7,590	: 7,786	: 15,676						
1922-23	28,033	: 1,941	: 1,505	: 11,720	: hy/	: 300	: 43,499	: 10,520	: 5,778	: 200	: 16,498					
1923-24	27,001	: 2,655	: 1,408	: 14,484	: hy/	: 350	: 45,898	: 15,470	: 2,009	: 300	: 17,779					
1924-25	28,119	: 4,812	: 1,518	: 24,221		: 338	: 59,008	: 17,882	: 1,316	: 255	: 19,553					
1925-26	39,455	: 3,431	: 1,182	: 22,423		: 406	: 66,898	: 23,022	: 2,302	: 517	: 25,351					
1926-27	41,047	: 14,046	: 3,865	: 22,141		: 355	: 81,454	: 36,147	: 2,421	: 296	: 38,364					
1927-28	42,590	: 3,602	: 11,665	: 36,147		: 366	: 94,370	: 36,418	: 2,982	: 381	: 37,781					
1928-29	56,589	: 7,210	: 5,056	: 45,988		: 451	: 115,294	: 37,852	: 1,623	: 559	: 40,034					
1929-30	75,260	: 3,342	: 4,097	: 54,070		: 431	: 137,200	: 42,678	: 1,325	: 202	: 44,705					
1930-31	92,495	: 802	: 7,312	: 33,291		: 657	: 134,557	: 45,499	: 2,660	: 191	: 48,350					
1931-32	36,207	: 306	: 3,455	: 36,201		: 507	: 126,676	: 42,701	: 1,823	: 286	: 44,310					
1932-33	81,866	: 297	: 2,399	: 43,112		: 260	: 127,934	: 44,014	: 3,373	: 373	: 47,765					
1933-34	80,109	: 166	: 3,985	: 35,705		: 394	: 120,419	: 47,437	: 2,711	: 567	: 50,715					
1934-35	69,704	: 15,016	: 33,462	: 33,291		: 577	: 122,364	: 50,964	: 1,421	: 413	: 52,798					
1935-36	69,566	: 4,837	: 8,399	: 47,819		: 788	: 131,409	: 52,992	: 928	: 439	: 54,409					
1936-37	77,000	: 9,141	: 6,495	: 44,784		: 554	: 137,974	: 54,439	: 1,435	: 654	: 56,523					
1937-38	81,446	: 5,000	: 4,000	: 58,000		: 500	: 148,946	: 56,000	: 1,500	: 500	: 58,000					

YEAR	TOTAL
1921-22	4,900:
1922-23	5,336:
1923-24	4,692:
1924-25	5,248:
1925-26	5,431:
1926-27	5,962:
1927-28	6,762:
1928-29	6,709:
1929-30	6,691:
1930-31	6,669:
1931-32	6,568:
1932-33	5,940:
1933-34	5,587:
1934-35	5,394:
1935-36	6,327:
1936-37	7,282:
1937-38	8,260:
TOTAL IMPERIAL	
1921-22	1,976:
1922-23	1,916:
1923-24	2,655:
1924-25	5,152:
1925-26	244,023:
1926-27	257,735:
1927-28	257,059:
1928-29	3,256:
1929-30	322,323:
1930-31	346,265:
1931-32	362,334:
1932-33	382,503:
1933-34	391,909:
1934-35	400,203:
1935-36	404,933:
1936-37	409,026:
1937-38	383,049:
TOTAL	10,238:
0:	4,050:
0:	1,170:
0:	3,754:
0:	3,610:
0:	2,017:
0:	2,329:
0:	2,420:
0:	1,119:
0:	638:
0:	641:
0:	516:
0:	304:
0:	713:
182:	232:
0:	793:
0:	563:
0:	693:
0:	300:
1,1,194:	1,941:
193,916:	1,941:
211,286:	2,655:
224,302:	5,152:
3,431:	14,940:
15,283:	12,142:
15,283:	17,063:
4,264:	16,052:
257,059:	16,624:
257,059:	16,939:
1,579:	18,253:
3,256:	18,309:
4,883:	16,352:
1,629:	19,3,608:
21,517:	18,6,793:
1,579:	18,9,709:
297,919:	18,9,733:
322,323:	18,9,733:
346,265:	18,9,733:
362,334:	18,9,733:
382,503:	18,9,733:
391,909:	18,9,733:
400,203:	18,9,733:
404,933:	18,9,733:
409,026:	18,9,733:
383,049:	18,9,733:
5,000:	18,9,733:
7,605:	18,9,733:
10,238:	18,9,733:
0:	3,952:
0:	4,063:
0:	3,701:
0:	4,001:
0:	3,821:
0:	3,908:
0:	3,622:
0:	3,963:
0:	3,584:
0:	3,617:
0:	3,657:
0:	3,658:
0:	3,501:
0:	3,662:
0:	3,478:
0:	3,310:
0:	3,326:
0:	3,316:
0:	2,797:
0:	2,320:
0:	3,385:
0:	4,719:
0:	4,457:
0:	4,885:
0:	5,712:
0:	7,797:
0:	9,662:
0:	9,657:
0:	10,658:
0:	10,501:
0:	9,662:
0:	9,391:
0:	9,392:
0:	10,906:
0:	11,632:
0:	12,860:
0:	4,400:
0:	4,600:
0:	0:
0:	4,900:

Compiled by Shanghai Office, Office of Foreign Agricultural Relations, from reports of tobacco monopolies in respective areas. ^{a/} Weight upon original entry in storage. ^{b/} Weight when imported. ^{c/} Farm weight. ^{d/} Leaf, stems, and scrap returned to storage from factories; leaf grown on experiment fields; leaf returned to storage from exhibits and leaf confiscated. ^{e/} Weight on removal from storage locally or for export. ^{f/} Redrying loss on flue-cured leaf, shrinkage in storage on leaf sold, leaf removed from storage for exhibits and experimental purposes, damaged and destroyed, and stems and scrap sold. ^{g/} Records somewhat doubtful due to records and products having been destroyed by 1923 earthquake. ^{h/} Approximated.

Factory Production and Distribution of Products

Factory Production

Manufacturing plants for tobacco products are widely distributed throughout the Empire. There are 22 factories in Japan proper, 4 in Chosen, and 1 in Taiwan. They are located in accordance with availability of leaf and centers of consumption. Small plants are often located in tobacco-producing districts, and almost every large city has a factory. Practically all of the factories manufacture cut tobacco, and most of them produce cigarettes. Cigar production, however, is limited to 2 factories, 1 in Tokyo, Japan, and 1 in Taiwan.

The factories are very modern and well equipped. Somewhat more hand operations are observed than is the case in tobacco-product factories in the United States. Improved machinery, however, is constantly being introduced, hand labor is decreasing, and production per operator rising. The machinery used is very similar to that in the United States, and most of it is made in a plant maintained by the Japanese monopoly.

Factory employees as well as all other workmen and officials of the monopolies are classified as civil service employees. Wages are low in terms of American standards. For tobacco factory workers in Japan proper the average daily wage in 1936 was only about 62 cents for men and 31 cents for women. These rates, however, are above the average obtained by workers engaged in other lines of factory production. A uniform system of promotion is maintained and retirement with age or disability is provided. Hospital, health, and recreation facilities are also afforded by the monopoly.

Manufacture of products is carried out on a well-managed uniform basis. Large stocks of tobacco are carried. The end-of-year carry-over for the Empire as a whole normally amounts to about a supply for a year and a half. Stocks are carried from crops of 3 or more years and uniform blends are maintained through mixing of tobacco from 2 or 3 years' harvest. Production is carried on at a relatively uniform rate throughout the year. There is no wide seasonal fluctuation in either production or sales.

Distribution

At present the monopolies maintain control over the distribution of tobacco products from factory to consumer. Each monopoly maintains a system of warehouses. These warehouses keep large supplies of all products of the monopoly as well as quantities of those produced by other Empire monopolies. Each warehouse serves a number of distributing points that maintain small stocks of products and make deliveries direct to retailers. The movement from factory to retailer is accomplished in a relatively short period, thereby providing consumers with freshly made products.

Despite the monopoly control of the industry, advertising of tobacco products is fairly extensive. All established brands of various products are advertised largely by window posters and billboards. When new brands are introduced, for which a monopoly wishes to increase consumption, relatively extensive advertising campaigns are conducted in newspapers, magazines, on motion picture screens, and by other means.

A wide price range is offered in all products. In Japan proper retail prices for domestically produced cigarettes in 1933 varied from as low as \$1.62 to \$5.94 per thousand pieces, cigars ranged in price from \$2.70 to over \$22.00 per hundred, and cut tobacco from \$0.23 to \$2.70 per pound. Similar price ranges exist for domestically manufactured products in Chosen and Taiwan. In general, the most popular brands of a specific product are in the lower price range. Often the very lowest-priced brand of a particular product is the largest seller.

Sales of tobacco products are to a great extent concentrated in the larger cities. For Japan proper, over 20 percent of total cigarette sales is in the Tokyo prefecture. An additional 39 percent of the total is represented by sales in 9 of the other 47 prefectures. In Chosen over 20 percent of the total is in the province in which Keijo, the capital, is located. Cigar sales are limited almost entirely to large cities. Sales of cut tobacco are also concentrated in the larger cities but to a less extent than is the case for cigarettes and cigars.

PROBABLE DEVELOPMENTS AFFECTING AMERICAN TOBACCO PRODUCERS

It is expected that developments in the tobacco situation of the Japanese Empire will be unfavorable to American tobacco farmers. For the immediate future it appears that developments will follow the trend of recent years. The Empire will continue its attempts to attain self-sufficiency in tobacco requirements; imports of leaf (except from Manchuria and occupied areas in China) will continue to be restricted; domestic leaf production will be maintained or increased; consumption will probably not change materially, and efforts to increase exports that will replace some American tobacco abroad will continue.

Developments beyond the next 3 to 5 years will depend in part upon the outcome of the present conflict between China and Japan and the world situation in general, which are factors that can not be foreseen. In any event, it is expected that the Empire's future requirements of American leaf will continue to be limited to relatively small quantities of average or above-average quality flue-cured leaf needed in the manufacture of high-grade cigarettes. It is also expected that the Empire will continue to be a potential small competitor in our leaf export trade, especially as regards low-grade flue-cured leaf. Exports of domestic types, largely to Egypt, will probably continue at about the level of recent years. It is believed that the characteristics of the leaf will limit its exports to Europe and other important tobacco-importing areas.

The present prohibition of tobacco imports from the United States and other strictly foreign sources will likely continue until the Empire returns to its normal position in world trade. If this does not occur for some years, it is possible that Japanese consumers may lose their taste for American flue-cured leaf, and if imports are renewed they might be from sources other than the United States.

Continued exports and particularly those of flue-cured leaf from the Japanese Empire, which are being increased as a result of the country's present trade and financial situation, may, if prolonged, result in the leaf being accepted by certain countries as a suitable substitute for American flue-cured. Once established, the demand for it might increase to the detriment of American farmers.

There is but little doubt that the Japanese Empire can continue to supply its tobacco requirements at a cost below that which it would have to pay for American leaf and, if circumstances require, produce a surplus for export. Land is scarce in Japan proper and Taiwan, but close cropping and scientific application of fertilizer have resulted in a continuous increase in the output of the islands' agricultural products. As has been mentioned, tobacco is set between rows of barley before the barley is harvested and is grown and harvested before the planting dates of the next crops to follow. There are additional areas in Japan proper that are suitable for tobacco and where the above system can be followed without materially displacing essential food crops. There is perhaps some possibility of increased production through higher yields accomplished by further intensive fertilizing. Such increases, however, may not be economical.

There is ample room for expansion of tobacco production in Chosen. Crop production in this part of the Empire has not become as intensive as in Japan proper and Taiwan. Developments in Chosen in this respect are at present at about the stage they were in Japan proper 15 to 20 years ago. Chosen tobacco, and particularly flue-cured, is considered as good or better than that grown in other parts of the Empire and can be produced cheaper. It is therefore probable that Japan proper and Taiwan may eventually obtain substantial supplies of tobacco from Chosen. It may also be possible for the Empire to secure relatively large quantities from Manchuria and thereby release part of its production for export. The production of flue-cured tobacco in Manchuria increased from about 5,000,000 pounds in 1936 to an early season estimate of 25,000,000 pounds in 1939. There are large areas suitable for its production and, if expansion continues at the rate of the past 4 years, production will soon exceed domestic requirements.

The shift in production from native types of tobacco in the Japanese Empire to flue-cured that has occurred in recent years is expected to continue. The future trend to flue-cured will probably be greatest in Japan proper where its need for use in cigarettes is more pronounced than is the case in other parts of the Empire. In the case of Chosen and to some extent Taiwan, native types of tobacco are especially suited for use in cigarettes. For Japan proper, however, native types, except when blended with foreign types, can be satisfactorily used only in mouthpiece cigarettes, of which the consumption is declining.

The expansion in production in Japan proper of American-type burley tobacco is expected to continue for some years. This type is being used domestically in a blended cigarette similar to standard American cigarettes. Requirements for such use will probably expand with increased production, and it is not likely that it will ever be exported in competition with American burley.